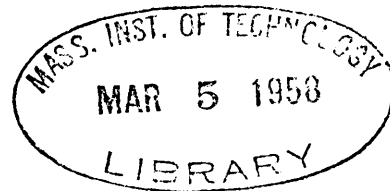


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A NEW QUADRANGLE FOR
CORNELL UNIVERSITY



A Thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Architecture at the
Massachusetts Institute of Technology

August 15, 1957

.....
Dean Pietro Belluschi
Dean of the School of Architecture and Planning

.....
Professor Lawrence B. Anderson
Head of the Department of Architecture

.....
Earl Robert Flansburgh
Bachelor of Architecture, Cornell University, June 1954

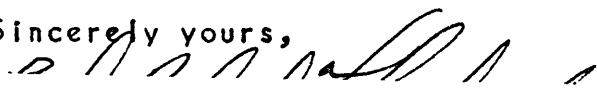

323 Westgate West
Cambridge 39, Mass.
August 14, 1957

Dean Pietro Belluschi
School of Architecture and Planning
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Dean Belluschi,

In partial fulfillment of the requirements
for the degree of Master of Architecture, I should
like to submit my thesis entitled, "A New Quad-
rangle for Cornell University".

Sincerely yours,


Earl Robert Flansburgh 

DEDICATION

To my wife, Polly

A C K N O W L E D G E M E N T S

The development of this thesis has been aided by many members of the staff at both M.I.T. and Cornell University. Without their able guidance and generous assistance this thesis would not have been possible. I would like to take this opportunity to acknowledge the help of the following:

At M. I. T.

Dean Pietro Belluschi

Prof. Herbert L. Beckwith

Prof. Albert Bush-Brown

Prof. W. H. Brown

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Paul Rudolph, Minoru Yamasaki, and Imre Halasz.

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Vice-Pres. J. L. Zwingle

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Dean Francis E. Mineaka

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Prof. H. D. Albright

Prof. William W. Austin

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Mr. John W. Humphries

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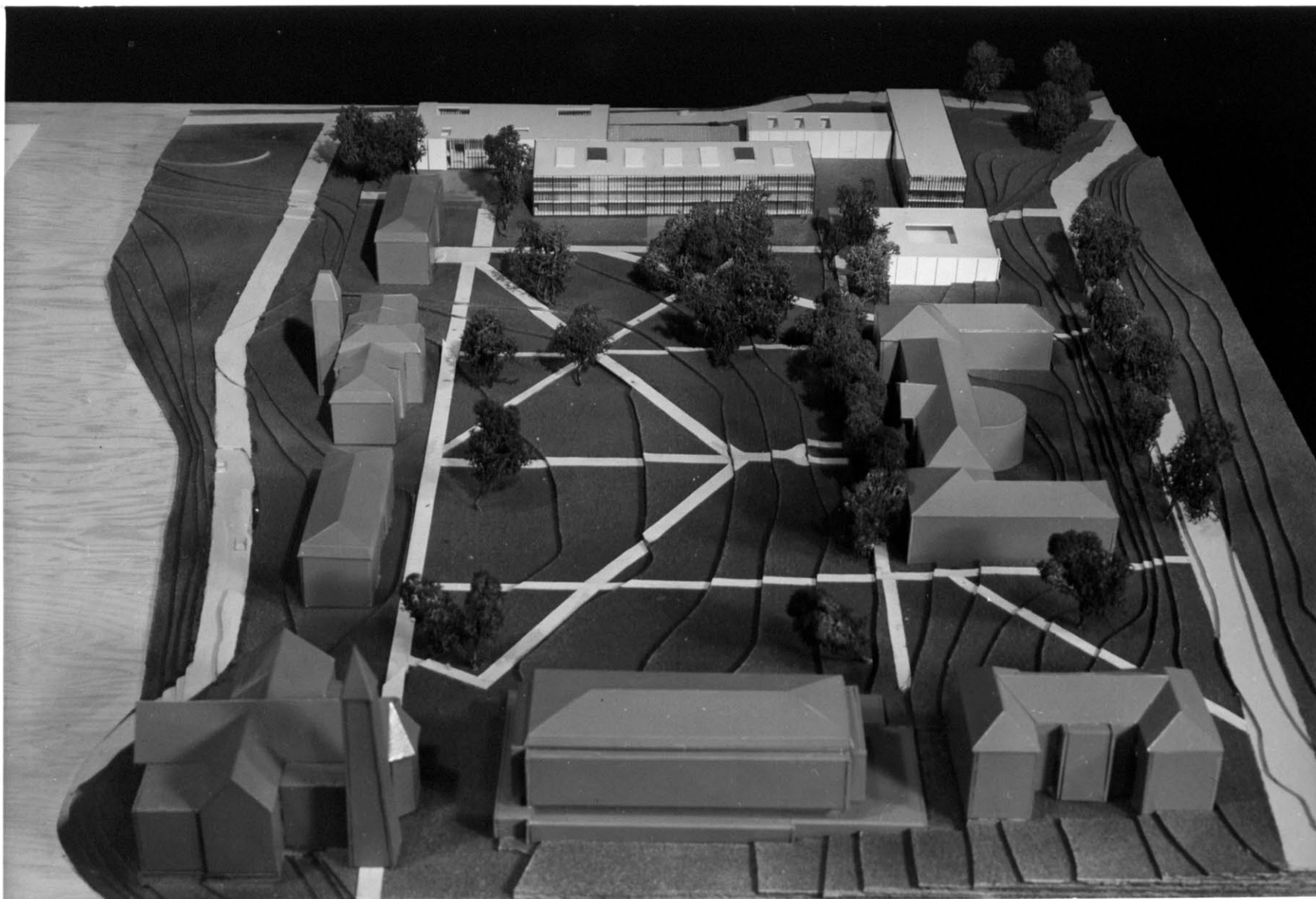
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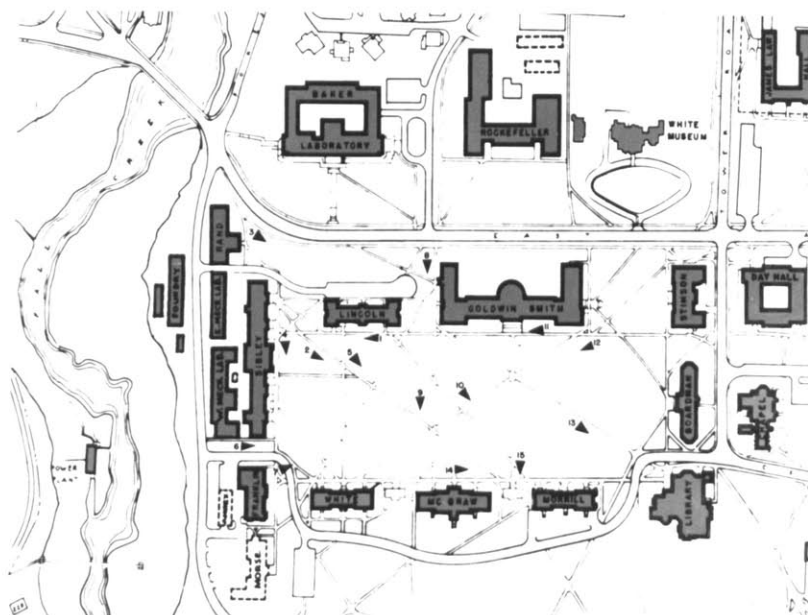
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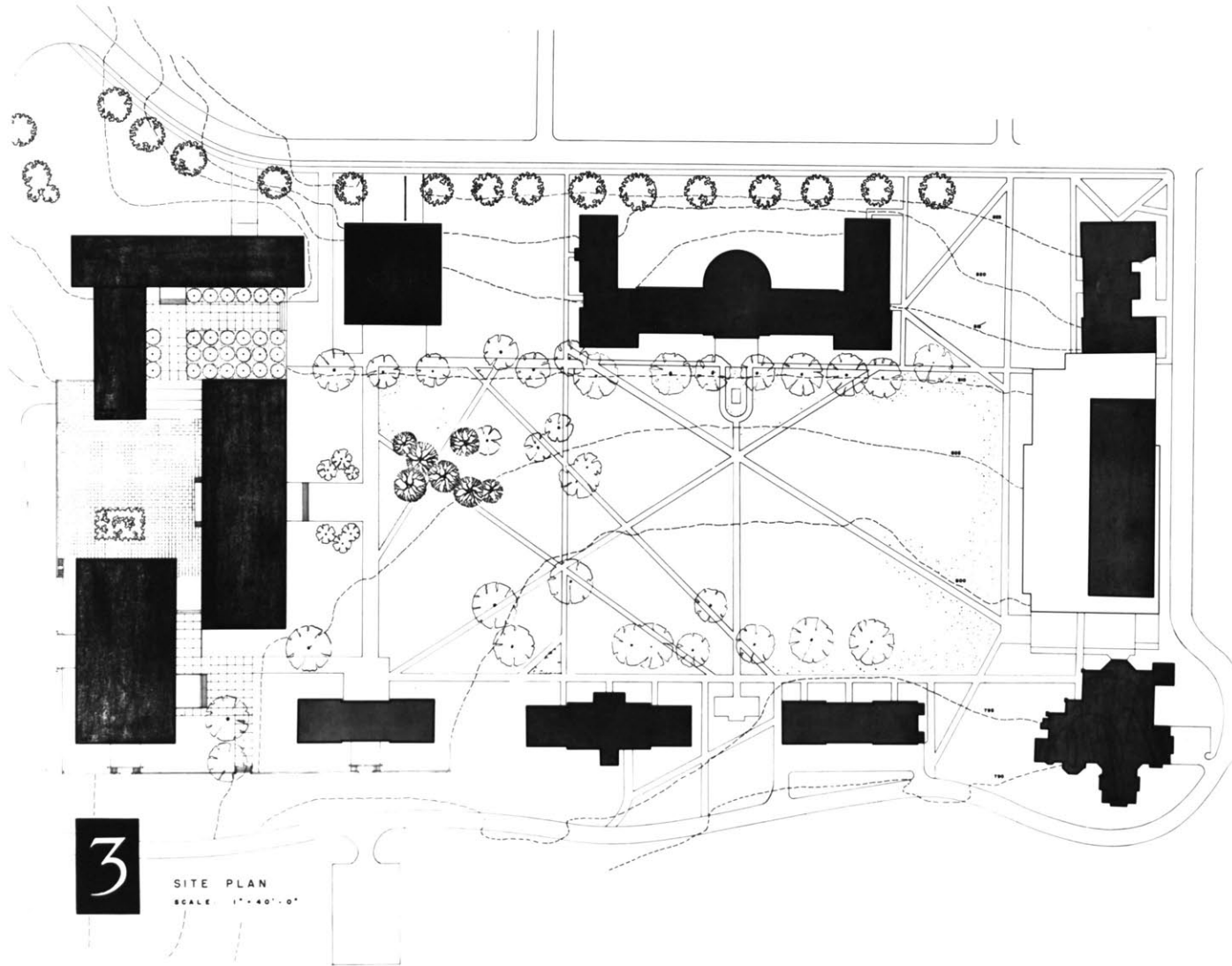
MASTER IN ARCHITECTURE THESIS

EARL R. FLANSBURGH



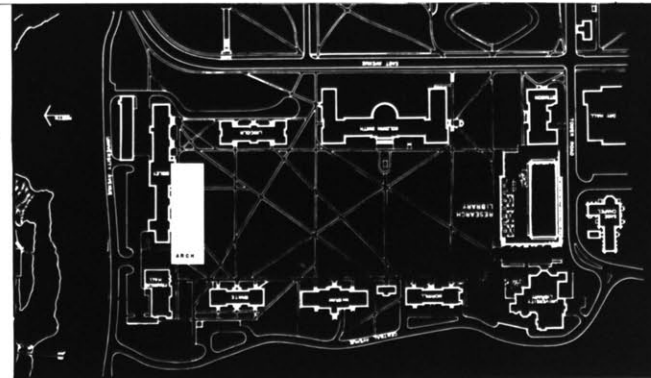






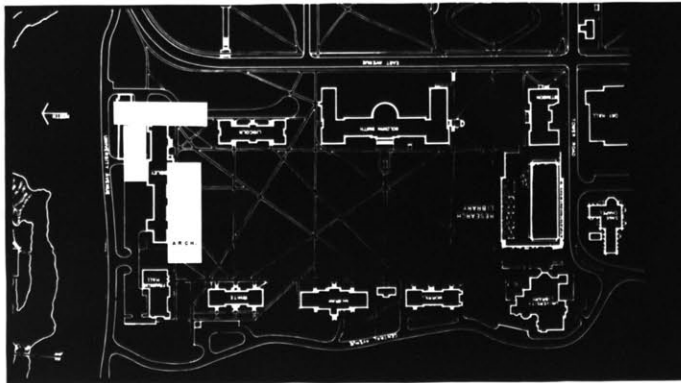
FIRST PHASE

BUILDINGS REMOVED: SIBLEY HALLS
BUILDINGS CONSTRUCTED: ARCHITECTURE



SECOND PHASE

BUILDINGS REMOVED: NONE
BUILDINGS CONSTRUCTED: MUSIC & SPEECH & DRAMA
PRACTICE BUILDING



THIRD PHASE

BUILDINGS REMOVED: FRANKLIN HALL
LINCOLN HALL
BUILDINGS CONSTRUCTED: FINE ARTS &
MUSEUM ART

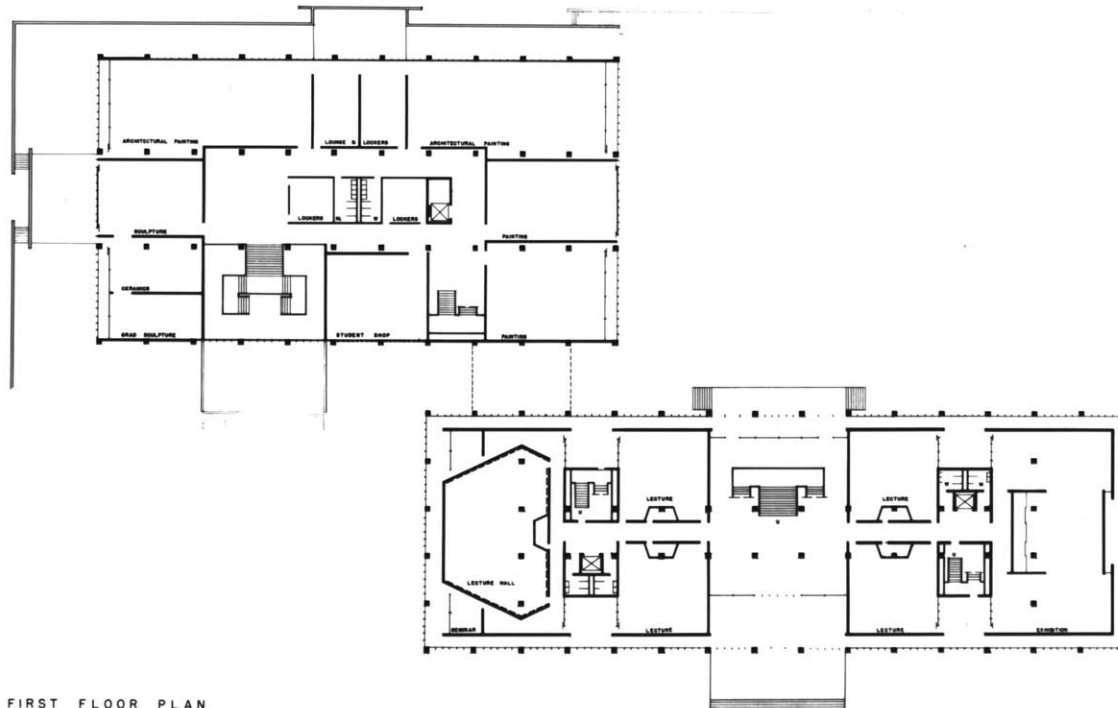


4

PROPOSED DEVELOPMENT

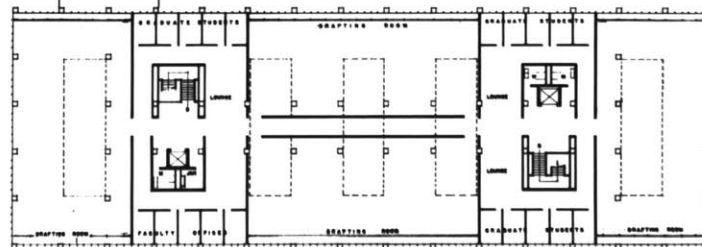
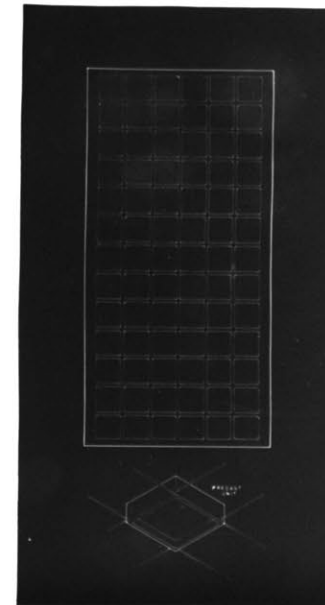
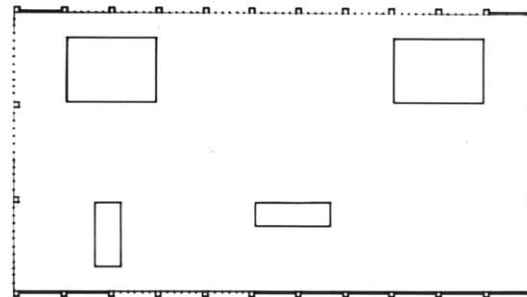


ELEVATION FROM MAIN QUADRANGLE



5

FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"



7

THIRD FLOOR PLAN
SCALE: 1/16" = 1'-0"

A NEW QUADRANGLE FOR
CORNELL UNIVERSITY



A B S T R A C T ·

- a. Title: A NEW QUADRANGLE FOR CORNELL UNIVERSITY
- b. Name of Author: Earl Robert Flansburgh
Bachelor of Architecture
Cornell University, June 1954
- c. Submitted for the degree of Master of Architecture
in the Department of Architecture on August 15, 1957
- d. Abstract of Thesis:

The problem of this thesis is the creation of a new quadrangle for Cornell University. This quadrangle is to be surrounded by a College of Architecture with its Department of Art and the Departments of Fine Arts, Music and Speech and Drama in the College of Arts and Sciences.

The design of this new outdoor space and the buildings which surround it is based on the anticipated needs of the University for 1970.

The new buildings created by this thesis will be located at the north end of the main quadrangle at Cornell. To the south of this site is a majestic view of the College of Arts and Sciences screened by tall elm trees. Directly north of this site is the Fall Creek Gorge 150 feet deep with cascading waterfalls.

The view to the west overlooks Cayuga Lake and the rolling farm land beyond.

With this beautiful site special attention has been given in the design to the careful placement of the buildings to take advantage of the glories of nature.

As a background for the development of this thesis a careful study was made of the forces influencing collegiate architecture with particular attention to those which have influenced Cornell. It is important here as in all architecture for the architect to understand the special philosophy and needs of the society he is attempting to serve.

I N T R O D U C T I O N

Located in the rolling hills of upstate New York is one of the largest and least "ivied" of the Ivy League universities. It is the youngest and most diverse of these historic eastern institutions, Cornell University.

This thesis is concerned with the future planning of Cornell University and specifically with the planning of the College of Architecture and its Department of Art and the departments of Fine Arts, Music and Speech and Drama in the College of Arts and Sciences. This thesis is based on the estimated requirements for the University in 1970.

As background for the study of the problem at Cornell this thesis also proposes to show the major forces effecting the development of Collegiate Architecture in America. Collegiate architecture, like all other forms of architecture, is not produced in a vacuum, free of outside influences but rather is sensitive to the various changes in our society. The forces which direct the course of our educational ideas also influence the direction of our collegiate architecture.

THE MAJOR FORCES EFFECTING THE DEVELOPMENT OF
COLLEGIATE ARCHITECTURE

THE MAJOR FORCES EFFECTING THE DEVELOPMENT OF COLLEGIATE ARCHITECTURE

1. The Change in the Educational Philosophy of American Higher Education Since 1870

The American University system at the close of the Civil War was based upon the traditional English concept of higher education. The major courses offered by every university or college were the classics and mathematics.

Most of these schools in 1870 were small denominational institutions. The remaining few were aided by the state or privately endowed. None, however, had gained a great reputation. President Andrew Dickson White of Cornell University said in 1874, "As to Universities, our prevailing sect system has failed in two hundred and fifty years to develop one which ranks with institutions bearing that name in other great civilized nations, some of them younger than a multitude of American colleges. . ."

When Cornell was founded in 1865 President White and Ezra Cornell, the founders, ignored the traditional concepts of English education and

accepted instead the system that was then developing in Germany. This Germanic philosophy emphasized the lecture system, the free elective program, graduate work, and scientific research. Under this system Cornell offered courses in agriculture, engineering, and veterinary medicine on the same level with the traditional courses in the classics and mathematics.

Cornell became the first non-technical school to introduce courses in engineering. The first courses in American History and Oriental and far-eastern modern languages were also offered here in this freer educational atmosphere. As the founders said, these courses were not dominated by, "persons of any one religion or of no religion".² This earned the university the reputation of "godlessness" in the sectarian pulpits and journals of the day.

This lack of adherence to the traditional educational philosophy had its effect on Cornell's architecture. Rather than accepting the fashionable Colonial Georgian style, Cornell choose to adopt the contemporary architecture of the day. The first three buildings on the campus, Morrill, McGraw, and White Halls by a Syracuse architect,

Archimedes Russell, were designed in an "adaptation of the Florentine style".³ (see pages 7 and 8)

Cornell was not the only university effected by the German philosophy of education. Charles W. Eliot studied university education in Germany just prior to assuming the presidency of Harvard in 1869.⁴ Harvard adopted the elective system of course selection in 1884, and graduate courses in law and medicine were established in the same decade.⁵

During this period Harvard rather than continuing its Colonial Georgian style adopted the contemporary architecture of the era. Following the Civil War, Memorial Hall was erected in a brick Gothic style, undoubtedly influenced by the Ruskinian ideas popular in England at the time. In 1878, H. H. Richardson was employed to design Sever Hall in the simplified Romanesque style.⁶ Several other halls followed in the diverse styles of the last half of the 19th Century.

John Hopkins University was founded in 1876 emphasizing research and advanced work. The

Map of Cornell University showing three original
buildings: Morrill, McGraw and White Halls

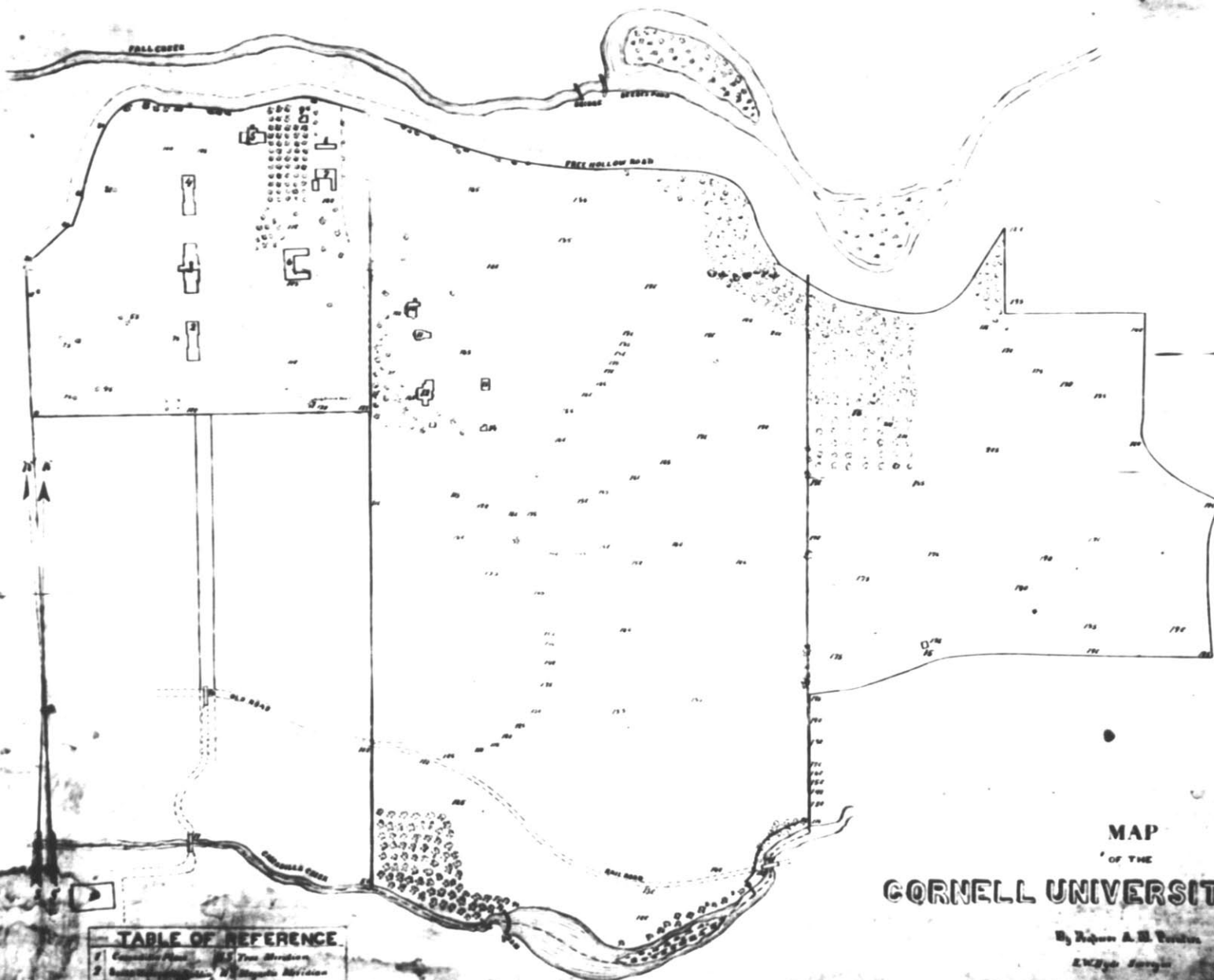


TABLE OF REFERENCE.

1. Campus Hall	11. Free Division
2. Administration Building	12. Olympic Station
3. Science Building	13. President's House
4. Engineering Building	14. President's Barn
5. Law Building	15. Laundry House
6. Library Building	16. Barn

MAP OF THE CORNELL UNIVERSITY ESTATE

By Robert A. M. Tilden.

ENGRS. BOSTON.

Y. N.Y. in 1874.

Any person who wishes to see this map may do so at the Cornell University Library.

Copyright 1874 by Robert A. M. Tilden.

Elevation of White Hall



0 5 10 20 30
SCALE IN FEET
REVISED 7-17-51

MORRILL HALL



seminar, another German educational method, was first introduced to this country by the University of Michigan in 1871.⁷

With increased emphasis on science and engineering came a new type of educational institution unknown before, the technical institute. Among the most prominent were, Massachusetts Institute of Technology founded in 1900, and Case Institute founded in 1880.

From 1880 to 1900 Cornell constructed several buildings following its established pattern of using contemporary architecture. Unfortunately, America was going through a period of particularly low architectural taste, and several styles were attempted with little success. Franklin Hall is an example of one of the architectural scars left by these fashions. (The proposed plans for the north end of the main quadrangle include the removal of Franklin Hall.)

The German philosophy of increased diversity of subject matter and emphasis on science was not, however, universally accepted. One of the best examples of this reluctance is found at Princeton

University.

In the late 1890's the Princeton administration decided that a consistent architectural style was necessary. The comments of Dean A. F. West of the Princeton Graduate School concerning Princeton's philosophy of education indicate the reason English Tudor Gothic was chosen. He said the Princeton curriculum would develop in "the primary form of organization found in our earliest colleges. . . inherited from the collegiate life of the University of Cambridge".⁸

It is interesting to compare the development of the architecture at Princeton by Cram, Goodhue and Ferguson influenced by the Anglo-Saxon theories of education with the architecture at Carnegie Tech by Palmer and Hornbostel influenced by the German philosophy.

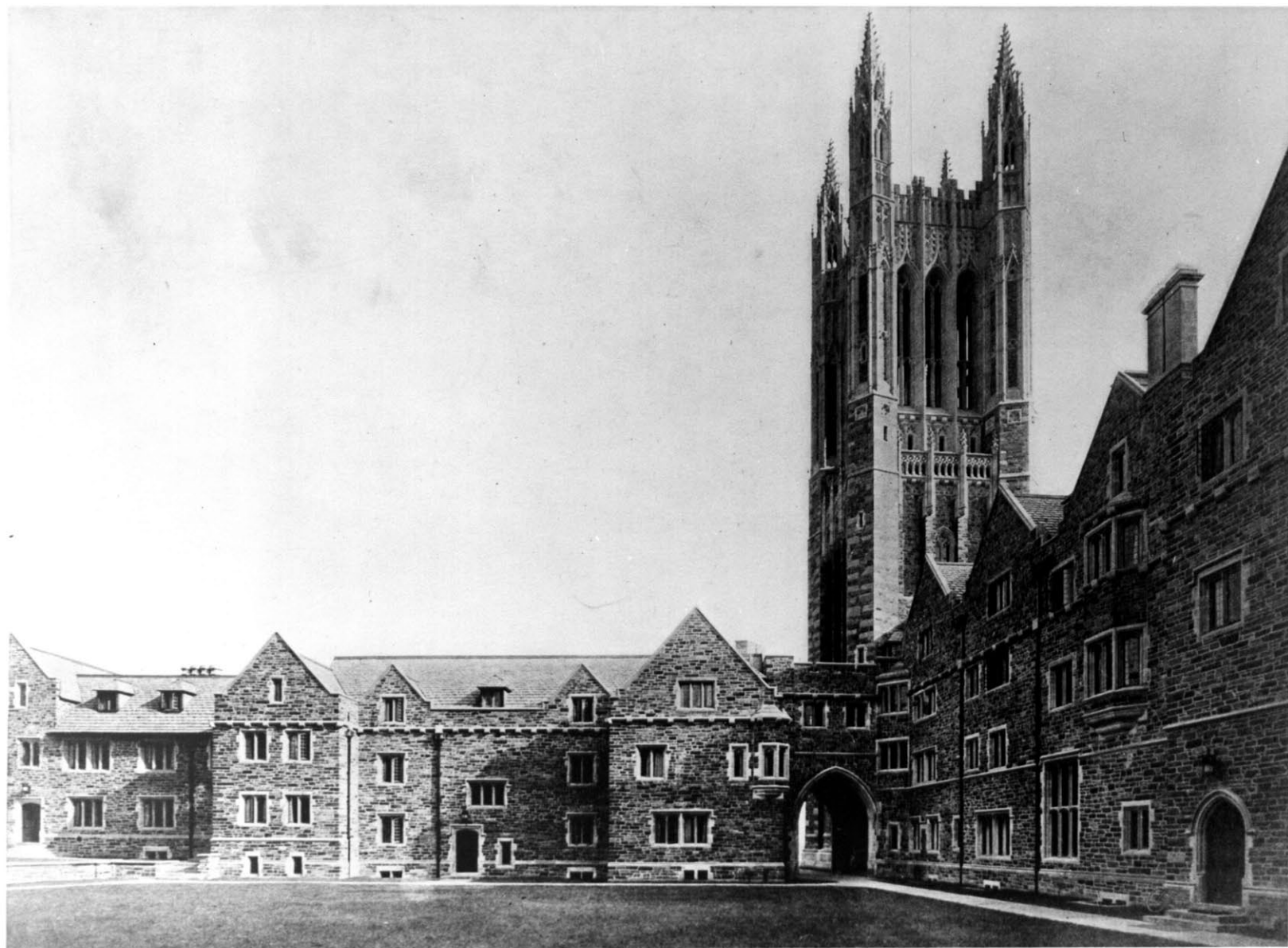
Ralph Adams Cram was the principal architect for the extensive Princeton Gothic development from the early 1900's until 1928. He designed the Graduate College, Campbell Hall, and the famous Chapel. He believed that collegiate architecture should return to "our own racial style that was

developed while we were yet consistent Christians".⁹
There was no recognition here of the development of steel as a building material nor that science was a part of every man's daily existence.

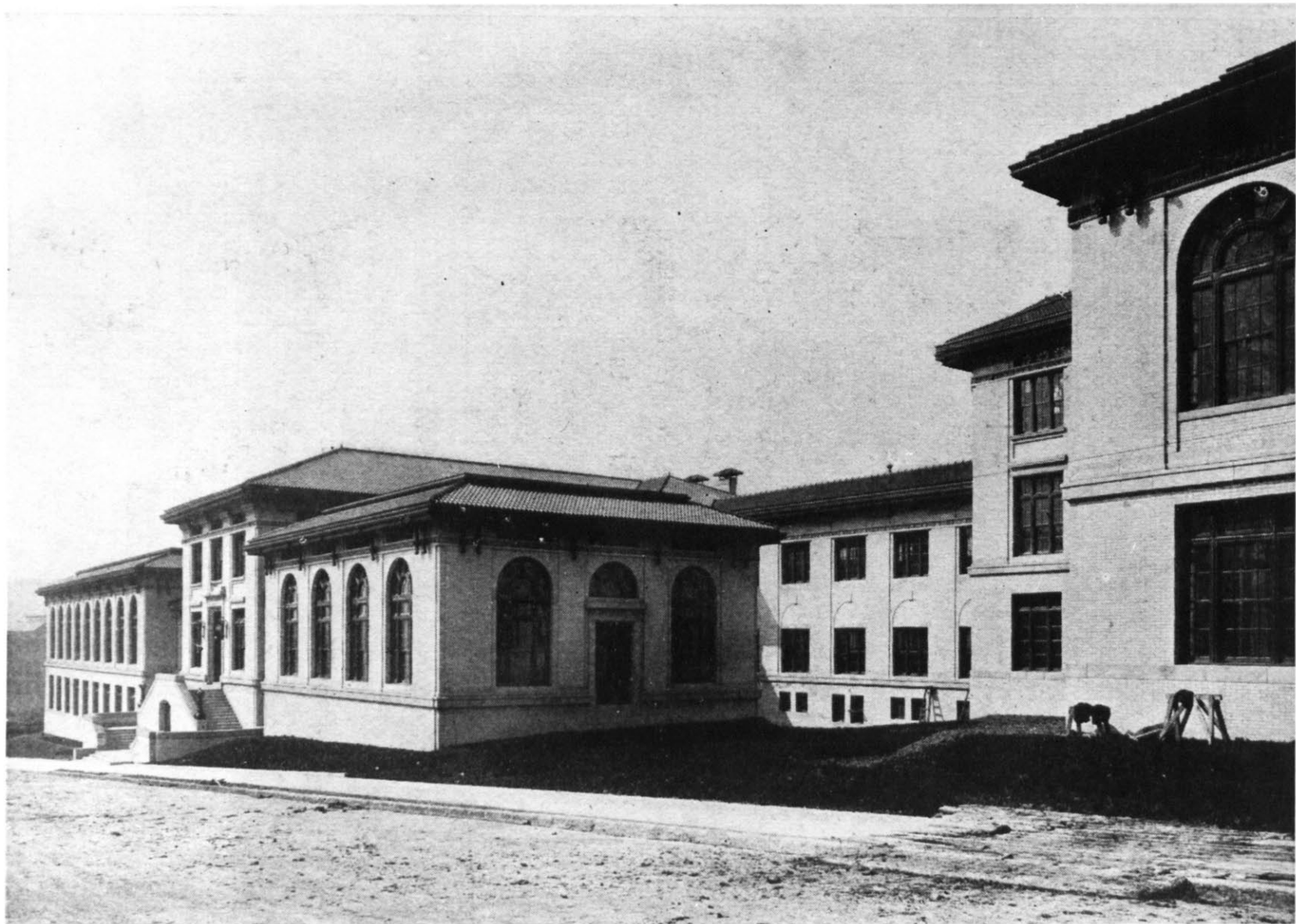
Cram was the craftsman of Gothic architecture. He had the classical taste which gave sophistication and beauty to his buildings. (see page 12) The publication Architecture said of the architects at Princeton, and it applies particularly to Cram, "It is a matter of continued gratitude to the university and to the architects at large that we should have here in America a number of men so well fitted to design in a foreign style with subtle adaptations to American needs as have been the architects of the various buildings upon the university campus."¹⁰

While Princeton was being built in its historic "foreign style", Carnegie Tech, 300 miles away, was being constructed along much different lines. Designed by Palmer and Hornbostel, it reflected the industrial age. Within its trim walls the accuracy and logic of science were emphasized. There was restrained decoration on the academic buildings designed in a simple direct style, a Greek key

The Graduate College at Princeton University



Carnegie Institute of Technology



frieze just below the roof overhang and a light cornice to accent the edge of the roof.

The only tie with traditional architecture appeared in the administration building which received giant doric columns and pilaster strips.
(see page 13)

At the turn of the century Cornell under the guidance of W. H. Miller, one of the earliest architectural students at the university, recovered from the two decades of tasteless architecture. Miller designed the main library and Boardman Hall in the style of H. H. Richardson. These two buildings were more the influence of Richardson's powerful designs than the result of the educational philosophy of the university.

The library was started in 1889 and completed in 1891. Its 173 foot tower and beautiful chimes have been the hallmark of the university. Boardman Hall was designed in 1891.¹¹

Stimson Hall at Cornell reflects the spirit of scientific clarity that was part of the Carnegie Tech designs. Stimson, also designed by Miller, has large glass areas and simple window detailing. Its

interior is a nervous system of gas, hot and cold water, and air supply facilities all within a complete order. When it was completed soon after 1900 it was the most modern scientific building in America.

The rise in the numbers of scientific schools and the increased interest in science also produced a rise in the specialization of students made possible by the freer elective system. This disturbed some educators who were concerned by the lower value students were giving the liberal education. These educators did not wish a return to the prescribed program advocated by Dean West at Princeton but rather suggested that the proper emphasis be placed on the traditional subjects.

In an article appearing in the Educational Review in 1911, Abbot Lawrence Lowell of Harvard gave a convincing argument for the liberal education of the professional man. Using scientific research methods he analyzed the success of the undergraduate professional schools of law and medicine. He found that the students who majored in mathematics did particularly well in law school. The students

who majored in chemistry (a natural pre-med major) usually did not do as well in medical school as did those who majored in the classics. He concluded that too much emphasis had been placed on the course and not enough on the excellence of work.¹²

Lowell was joined in his support of liberal education by Thorstein Veblen in his "Higher Learning in America" published in 1918. Veblen in addition to supporting the liberal education attacked the governing boards of the universities which were composed more and more of businessmen. Veblen laid the blame for the increased specialization on the governing boards and their puritan utilitarian idea that education was a means to an end and rarely just "good for a man".¹³

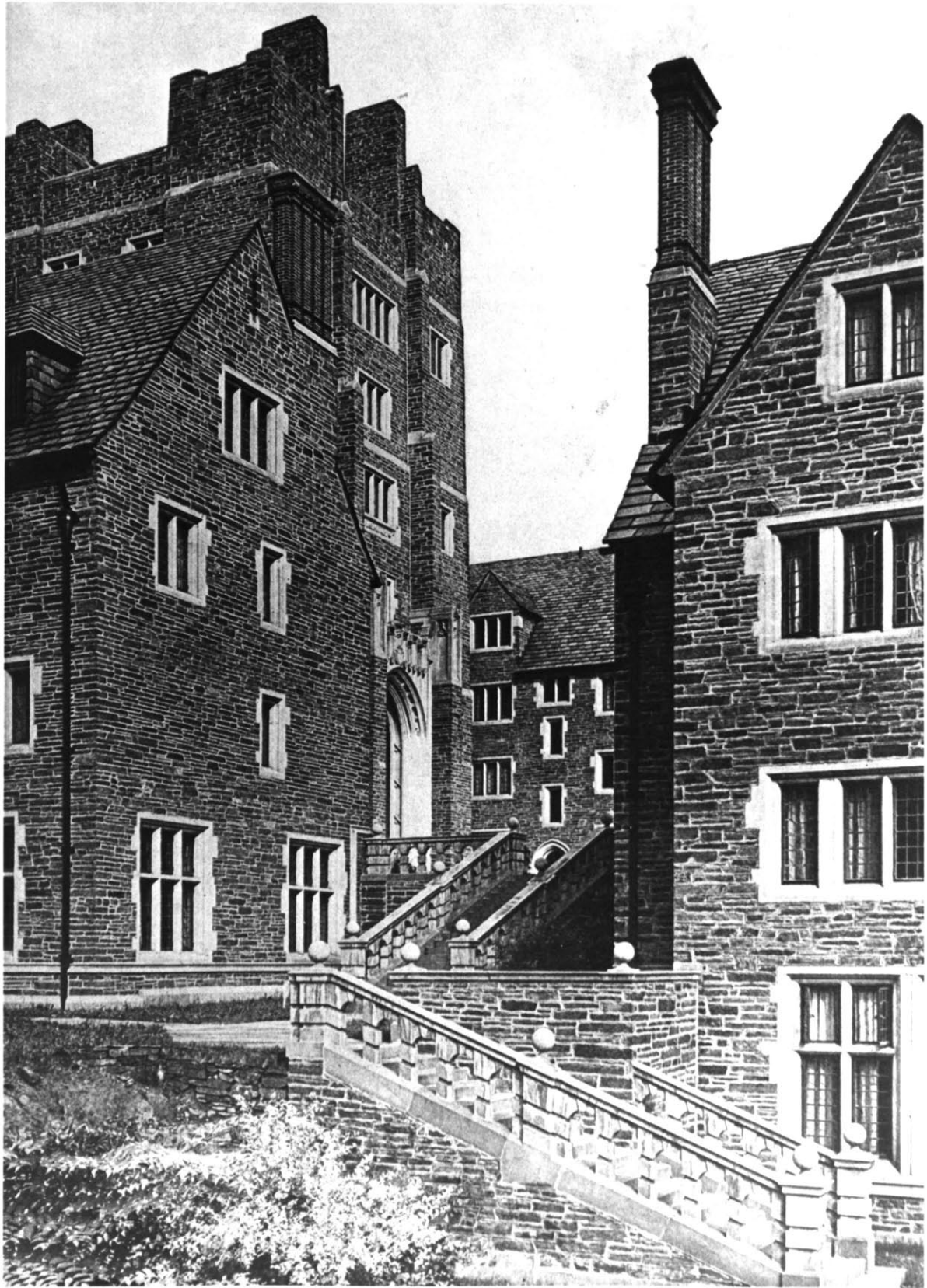
It is difficult to assess the effect these opinions by such outstanding men as Lowell and Veblen had on the architecture of the time. However, there was a retrogression to the classic and traditional architectural styles during the years from just before World War I until the depression of 1929. This retrogression by schools which had adopted architecture influenced by the scientific era, Harvard

and Cornell, and schools which had no attachment to traditional educational philosophy, M.I.T., was undoubtedly encouraged in some degree by the opinions of these scholars.

During this period Cornell built its first Gothic buildings. The Baker Men's Dormitories designed by Day and Klauder were completed just prior to the U. S. entry into World War I in 1917. None of the efficiency of planning or simple details seen in Stimson Hall is present here. Small rooms and cut up corridors were the result of this "foreign style". The towers in the composition do, however, form a striking outline against the sky and the lake in the background. (See page 18)

One of the most dramatic results of the increased industrial development in the United States was the growth of interest in the role of the businessman in industry and commerce. At the turn of the century Harvard founded a progressive graduate school of business. In 1924 a competition was held to design a new home for this school. The program for this competition implied that a design in the Georgian style would be desirable.

Baker Dormitories at Cornell University



This competition was won by McKim, Mead, and White with a design in that style.

This progressive school clothed in a traditional style indicated according to the Architectural Forum in 1927 that some of Lowell's ideas about a more liberal education had been adopted by Harvard. The Forum said, "The buildings for the Graduate School of Business Administration, Harvard University, were developed in accordance with the definite idea that businessmen are to take a larger share in the community which has been in the past so much in the hands of the learned professions, and if they are thus to lead, their training must include more than a narrow technical course in some speciality of business."¹⁵

The most startling reversal of previous trends was seen in the new campus built for M.I.T. along the Charles River. This project by Williams Nelles Bosworth completed in 1913 has little of the simplicity of Carnegie Tech.¹⁶ The great Greek Ionic and Doric columns on its main facades are more indicative of a classical university than a great technical institute.

On October 29, 1929, the giant house of cards that business and industry had built during the post-war era of the "roaring twenties", collapsed. Depression settled over the building industry.

For fifteen years because of economic ills or the preoccupation with World War II little construction took place on American college campuses. When this moratorium was lifted in 1945 the world of higher education had undergone some startling changes. The end of the prosperity of the 1920's did not end the progress of scientific development nor the emphasis on science and engineering in American education. The importance of science and engineering had been dramatically demonstrated during the war years. As the young pilots and gunners mates streamed back to the campuses under the G. I. Bill it became apparent that the courses in greatest demand were those giving some sort of technical or professional training.

There were several new types of engineering: chemical, aeronautical, and nuclear. Cornell opened divisions of chemical engineering in 1938, aeromautical engineering and engineering physics in 1945. Science had, in spite of the warnings of

Lowell and Veblen, become much more specialized to meet the enormous demands of industry. There were also new schools dealing with specialities within business management; schools of industrial and labor relations (founded at Cornell in 1945) and hotel management (founded at Cornell in 1950).

Since World War II industry has carried on an extensive campaign of advertisements and recruiting to interest talented young people in engineering and science. As a result of this intensive campaign the expanded teaching facilities at almost every engineering school are not meeting the demand of industry. The American Council on Education estimates that 30,000 to 40,000 engineers a year are needed by industry.¹⁷ In 1954-1955 all American institutions of higher learning granted 22,527 engineering degrees of all kinds.

This increased emphasis on engineering produced the first pure architectural expression of the Industrial Age on an American campus. In 1943 at Illinois Institute of Technology the first educational building using exposed structural steel was built by Mies Van der Rohe. This was part of a new campus designed in the style of ultimate sophisticated

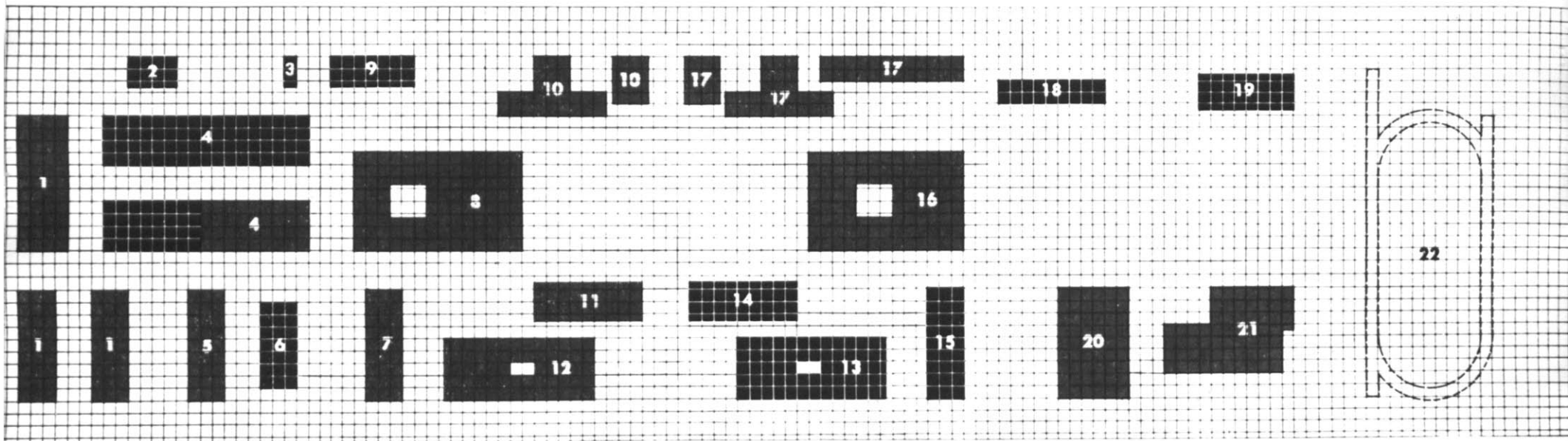
simplicity. The entire campus plan and every building were based on a 24 foot module.¹⁹ (See page 23)

This first building at IIT was a Minerals and Metals Research Building. Pencil Points summarized the effect of this building , "Consider what might have happened if the architects had approached this design problem on the basis of 'style'. Could the Gothic or Saracenic approach have produced as good a research laboratory?"²⁰ This was a building designed in the industrial age for that age. (See page 24)

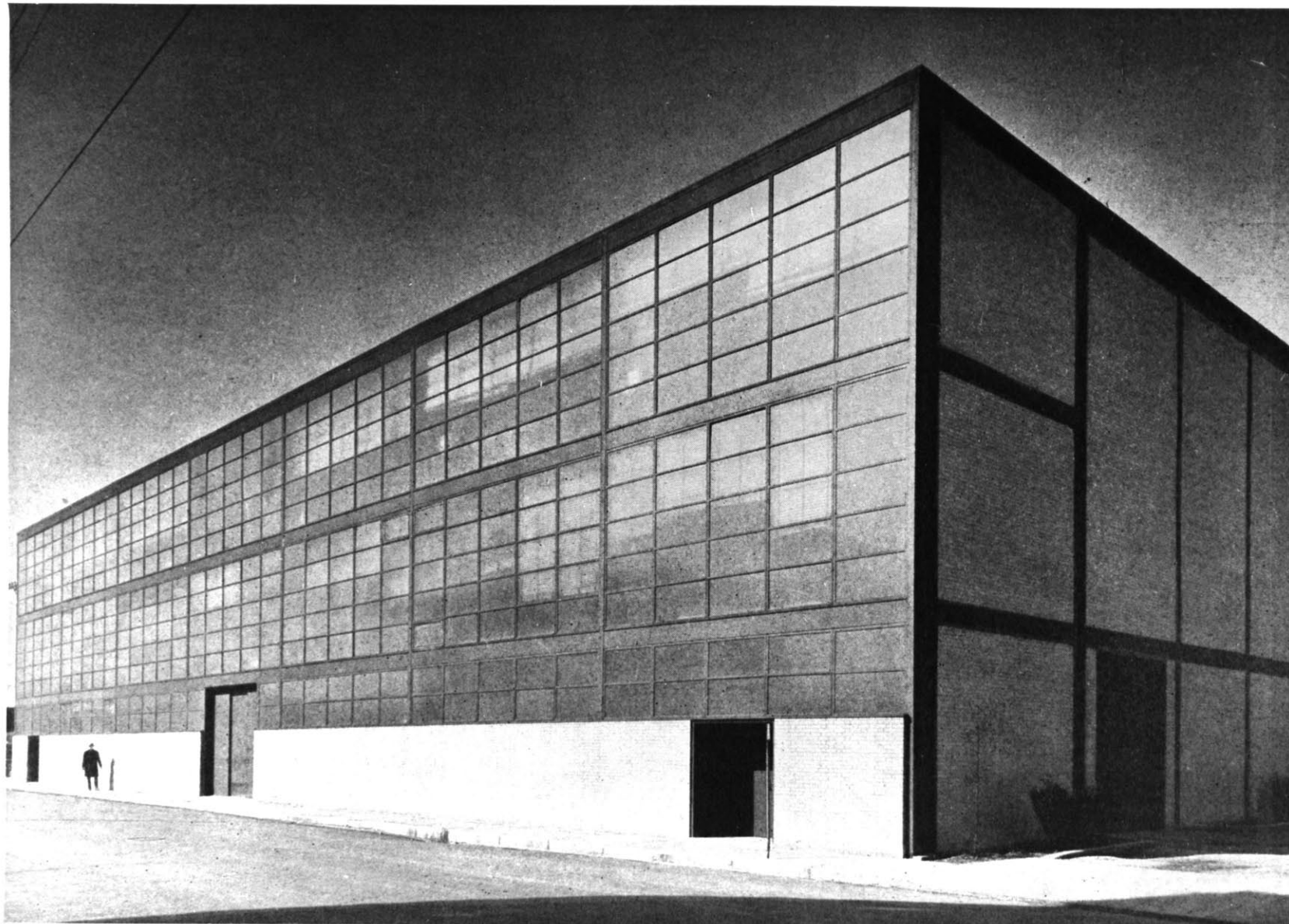
The style of Mies is exquisite when done by the originator, but it has proved to be a difficult expression to imitate. It is a cold strict order with a rigid discipline, and any attempt to compromise this order has failed.

In the post-war years Harvard recovered from its retrogression of the Business School and constructed a Graduate Center in another expression born of the industrial age, the International Style of Walter Gropius. (See page 25) This Graduate Center incorporated the work of contemporary artists as well as architects. The construction of this project

The Plan of IIT



The Minerals and Metals Research Building at IIT



The Harvard University Graduate Center

VERETT STREET

SARGENT SCHOOL

JARVIS STREET

ASTRONOMICAL
LABORATORY

ramp down

loading
platform

storage

coats

ramp up

meeting
room

lounge

sculpture

meeting
rooms

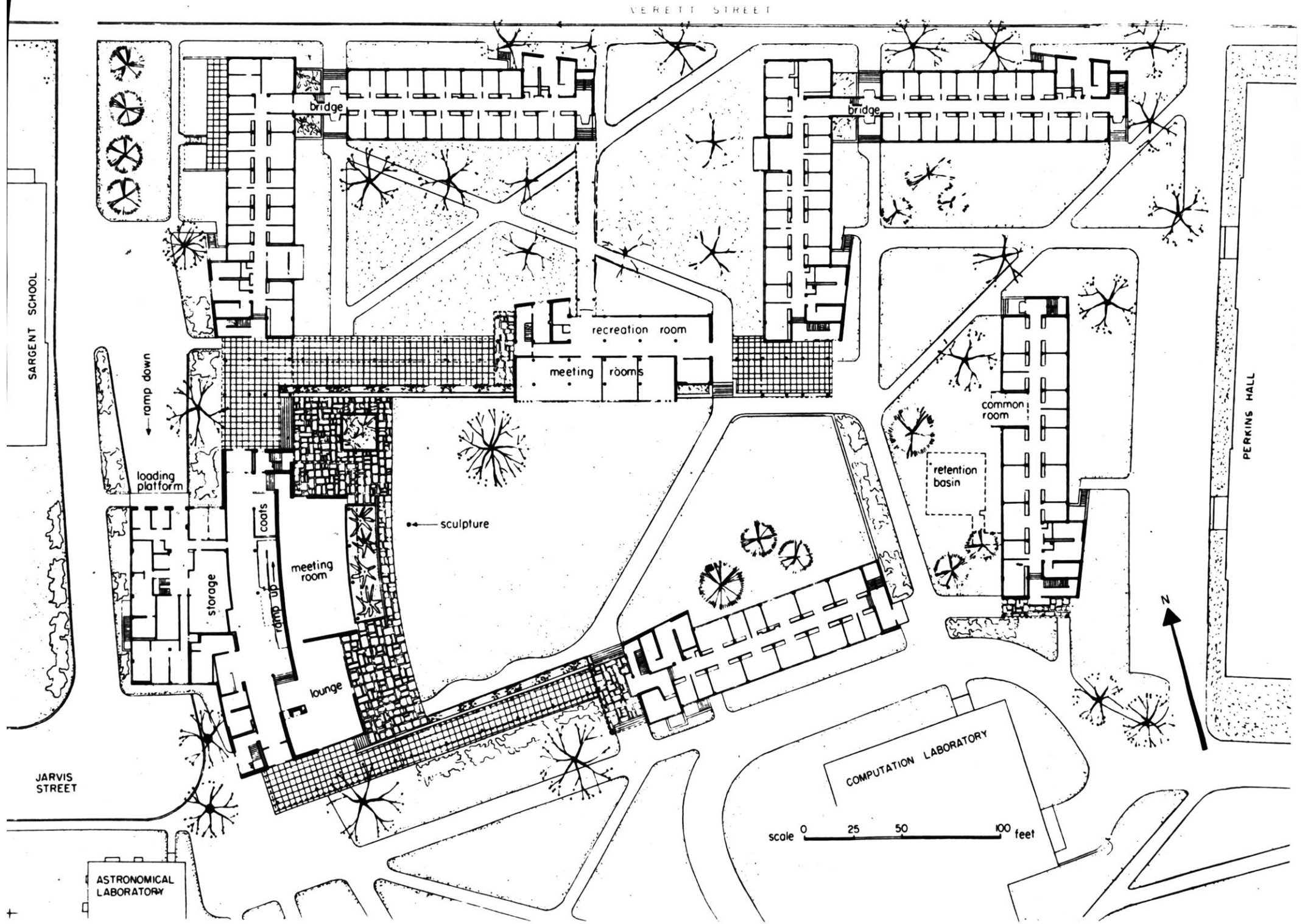
recreation room

COMPUTATION LABORATORY

scale 0 25 50 100 feet

N

PERKINS HALL



was consistent with Harvard's philosophy adopted in the middle of the 19th Century of educating the students to meet the diverse needs of industry.

The post-war needs of engineering produced IIT designed in the simple direct order and functionalism of the industrial world. The needs for modern leaders in law and science produced the Harvard Graduate Center, less ordered architecturally than IIT but richer in artistic amenities. Both these projects were pure 20th Century architecture with no eclectic tie to forms of the past. During this period the ideas of Harvard and IIT were being adopted by other campuses. This was true at Cornell.

To answer the demands for engineers Cornell has constructed six new engineering buildings. There have been only three other buildings built for instruction purposes during the same period.

Although these buildings have been designed by such well known architectural firms as Perkins and Will and Skidmore, Owning and Merrill, they are not in a pure architectural form but rather eclectic modern. They have neither the direct purity

of IIT nor the careful planning of space of the Harvard Graduate Center. There has been some attempt to blend these new buildings with the existing architecture on the campus. A notable example is Phillips Hall with two wings of crisp brick and aluminum panels and a third wing constructed of a local sandstone called "Cornell Stone". This third wing of "Cornell stone" laid in the random manner of the Baker Dormitories is not in keeping with the precise lines of the brick and aluminium. (See page 18)

It is hoped that the strength in diversity which has characterized Cornell's educational philosophy since its founding will soon be incorporated in its architecture. If different styles are to be used as they have been throughout the history of the university, each building should stand for itself and relate to its neighbor by composition rather than by compromise.

The philosophy of scientific education has been reflected for many years in the architecture of our college campuses. Recently, science and engineering have contributed new forms to architecture. The

Kresge auditorium at M. I. T. by Saarinen and the "Cow Palace" in Raleigh, N. C. are two examples of new forms.

With new forms have come improved methods of construction in the lift and tilt-up slabs. The latter was used in three dormitories for Drake University by Eero Saarinen in 1953.²¹

The architecture on our American campuses seems to be in harmony with our educational philosophy of emphasis on science and technology. In contrast to the philosophy of such traditionalists as Dean West, our educational process is undergoing constant change. As Walter Gropius said in the Architectural Review in 1948, " . . . modern man has made the important discovery that there is no such thing as finality or eternal truth".²²

The future philosophy for higher education will cover several broad areas.

1. Industry, unable to get all the engineers and technicians it needs from universities will continue training programs within its plants. This will mean that the college trained engineer will be used more and more for executive positions. This will result in more emphasis in training a man

how to think rather than simply to handle figures. This process of expressing greater interest in the well rounded individual than in the narrow technical specialist has already had some effect on our educational program. M. I. T. has recently incorporated a program requiring all undergraduates to take 20 percent of their courses in the humanities department. Cornell has strengthened its program of electives to be taken outside the engineering college.

2. This broadened educational philosophy will result in a more elegant collegiate architecture within the order established by society. There will be more rich decoration such as Paul Rudolph's in his Wellesley College Arts Center.

3. Colleges and universities are already planning limits on the number of students they will accept when the combination of increased population in the college age group and the increased percentage of students finishing high school meet in three or four years. Even some state institutions have decided on limits. Cornell is determined to limit enrollment to 13,500.²³ This will increase the pressure on the states to provide more higher

educational facilities. New York²⁴ and Massachusetts²⁵ are already making plans in this direction. This will mean increased construction of college and university buildings and even new campuses. Although these new campuses will have few traditional ties it is doubted that any outstanding architecture will result as state educational facilities are usually built on a minimum budget with the maximum of requirements.

4. With limited enrollment and a great diversity of programs more emphasis will be placed on President Lowell's ideas of quality of work rather than course of study for entrance into graduate schools. This is already the case in Law, Architecture, and Business. As our architecture develops in its diverse forms this standard of quality should also be a guide.

5. Increased diversity of students and curriculum have already had their effect on diverse architecture for college campuses. With this new freedom architects must exercise a greater sense of responsibility for construction based on order and discipline rather than cliché and caprice.

THE MAJOR FORCES EFFECTING THE DEVELOPMENT OF COLLEGIATE ARCHITECTURE

2. Financing of Higher Education

The financing of higher education in America stems from two traditions: private endowment and government aid.

Our earliest colleges were largely organized through the efforts of a few individuals, frequently ministers, who donated quarters for the college (Jefferson at the University of Virginia), libraries (John Harvard at Harvard) or land for college buildings and funds to maintain the college (Ezra Cornell at Cornell). This idea of personal endowment still exists although individual donations are usually smaller compared to the high cost of education.

Personal contributions have had a great effect on collegiate architecture as many gifts have been in the form of buildings built to conform to the desires of the donor. The University of Virginia founded in 1819 was fortunate to have a benefactor such as Thomas Jefferson who was rich in taste and artistic talent. His plan for the University has endured as one of the most outstanding examples of

university planning in America. (See page 33)

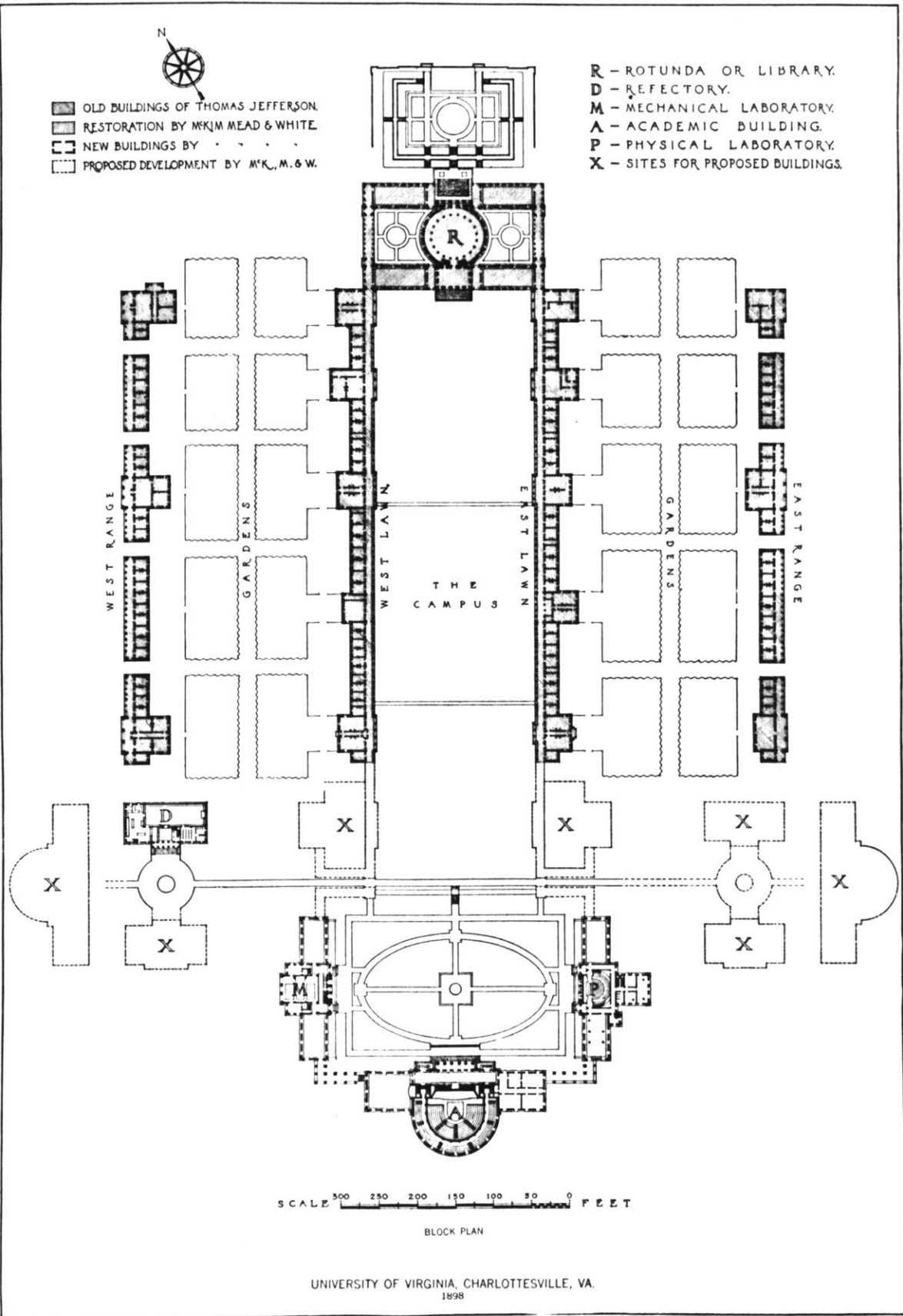
The men who followed Jefferson in this field of philanthropy were often richer in worldly goods but dependent upon others for taste and artistic talent.

The industrial revolution in America as it developed in the late 19th Century created new financial giants. These men made their money from the oil fields of Pennsylvania and the wires and rails that crossed the plains to the fur and lumber trade with the northwest.

To meet the needs of an expanded system of higher education, educators called upon these men of wealth. Their contributions followed two distinct patterns: aid to an existing college or university or establishment of a new educational institution. The latter was the case with Cornell University.

Ezra Cornell, founder of the university, made his fortune in the Western Union. With the aid of Andrew Dickson White, Cornell established the university on 300 acres of his farm and donated \$500,000 to endow the small university. The other financial support came at the outset from the

Jefferson's Plan for the University of Virginia
(Increased by McKim, Mead and White 1898)



Morrill-Land-Grant Act.

The first three buildings, Morrill, McGraw, and White, were designed in great haste primarily for their utilitarian value. They were authorized in March 1866 and under construction in October 1866.²⁶

As the university developed, individual contributions were made for individual buildings. Sage Chapel and Sage College were the result of the contributions of Henry W. Sage. Hiram Sibley donated West Sibley in 1870.²⁷ In the case of Sibley as with the first three buildings expediency was the guide. Sage Chapel and Sage College were designed in accordance with President White's idea of having a north quadrangle of stone and a south quadrangle of brick. The buildings which followed generally conformed to this arrangement.

Most colleges and universities were built in this piece-meal fashion. There were, however, a few which received all their endowment from one source. Carnegie Institute of Technology described in part one owes its unity of design to the single philanthropic gift of Andrew Carnegie.²⁸ The University

of Chicago was founded in 1890 by a gift of \$5000,000 from John D. Rockefeller. To this original contribution he added \$34,000,000 before his death. It was Rockefeller's request that the style of the university be English Perpendicular Gothic in brick. Since its founding the university has never deviated from this style.²⁹ Even today the new dormitories which are contemplated for the site of Frank Lloyd Wright's Robie house are to be "Modern Gothic".

The Duke family of North Carolina gave \$40,000,000 for the endowment and construction of Duke University in Durham, North Carolina. Another \$40,000,000 was added by James B. Duke at his death. Duke argued, ". . . that what we call Collegiate Gothic best fitted our educational traditions and aspirations for an inspiring environment at the same time meeting the manifold practical requirements of a modern university".³⁰

Collegiate Gothic was the preferred style of large donors before 1930. As William Harlan Hale wrote in an article "Old Castles for New Colleges" in the Architectural Forum in 1931, it has become a sign of enlightenment to donate a library, dorm-

itory or memorial tower and get as much personal glory out of the building. "Thus our colleges are likely to become museums of gilt and glory rather than work places of simplicity and directness."³¹

The growth of income and excess profit taxes since the 1930's encouraged men of wealth who had not already done so to place their money destined for philanthropic purposes in special funds or foundations, i.e. Ford Foundation and Rockefeller Foundation. It is from these foundations that the large grants come today. In many cases, this has not removed the money from the control of one man. There are still many men who either control personal funds in the excess of a million dollars or have control of industrial funds in excess of that amount.

These men are not the aristocrats of the 19th Century but rather the businessmen and industrialists of the 20th Century. Most of these men no longer cherish the romantic idea of education beneath the majestic spires of a Gothic church. In their minds is the efficient space which is adequately heated and lighted with a functional plan.

These men directing their personal, industrial, or foundation funds have been responsible for such buildings as the M.I.T. Chapel and Auditorium (Kresge Foundation), Cornell's Olin Hall (Olin Manufacturing), and the three chapels at Brandeis University (Brandeis Foundation). All are in the tradition of contemporary architecture.

As we move forward in architecture, only the most narrow of critics could say that we should return to the era of the Gothic and Classic revivals. Our education is now in the liberal German, scientific tradition rather than the English, classic ideal. Men trained in the varied ideas of the 20th Century education within 20th Century buildings are not likely to turn to architecture of the 15th Century.

Even though the control of money is still influenced by individuals as it was in Jefferson's time, the effect of that money has changed considerably. There are approximately 650 public and 1200 private institutions of higher learning in the United States today.³² It is estimated that these colleges and universities will need \$800,000,000 in addition to all funds now received from all sources

to do an adequate job of instruction for each year of operation from 1954 to 1963.³³ The amount contributed by individuals and industry is not recorded, but 61 major foundations in the U.S. in their last fiscal years contributed approximately \$250,000,000 to all programs, i.e. educational, social, international, etc.³⁴ As foundations are the major source of large amounts of money it appears that funds for college education and construction will have to come from new sources in addition to the contributions of individuals and foundations.

One source may be from the various levels of government. Unfortunately, the history of government has not been enriched by contributions of architectural masterpieces.

The first real contribution to higher education by the federal government was in the Morrill-Land Grant Act of 1862. This act provided 30,000 acres of public land in the western territories for every member of Congress from a given state who founded a university before 1874. Eighteen states added this endowment to the state universities and three gave it to private institutions (Massachusetts to

Massachusetts Institute of Technology, New Jersey to Rutgers University and New York to Cornell University).³⁵ This act was augmented by additional appropriations to land-grant institutions in 1890,³⁶ 1907, and 1935.

The Morrill Act encouraged the establishment of state supported institutions, even after the provisions of the act had expired. Unfortunately, these state institutions although they are now some of our largest centers of higher education, have been hampered by limited budgets and political difficulties in producing truly effective architecture.

The Federal Government in the Serviceman's Readjustment Assistance Act of 1944, the "G.I. Bill," aided 2,200,000 veterans of World War II to obtain a college education. During the twelve years that this program was in effect, and particularly during the first four, our college facilities were taxed to the maximum. New facilities were not generally added however as the enrollment of many

universities under the G.I. Bill was not the contemplated future enrollment. Cornell had a maximum of 15,000 students during its peak load, and its contemplated future growth is only 13,500 by 1970.

This federal program was renewed after the Korean conflict and 750,000 men have taken advantage of this program to obtain a college education.³⁷ Although both these programs have been influential in the development of educational policies and have been a great aid to both the students and the schools concerned, they have only indirectly influenced collegiate architecture.

The largest form of federal aid to construction has had a negative effect. Under the Federal Housing Administration certain funds have been provided for loans to colleges for the construction of new dormitories. This agency is one of the most conservative federal branches especially in its policy for approving loans. The dormitories for the University of Miami are a good example. When this university built its new campus following World War II it included dormitories for its students adjacent to the campus. The dormitory project was financed

through the FHA. The federal requirements stipulated that the dormitories should be designed as apartments rather than as student facilities to allow for public rental if the university was forced to close. The University of Miami had been established during the depression and had survived the worst of that financial crisis, but this had no effect. Although many FHA projects have not had as peculiar requirements as this, the conservative attitude of this agency most closely connected with collegiate architecture is not a great stimulus to contemporary design.

The Federal government has been active in contributions to colleges of agriculture for research, but no money is ever given here for construction. The buildings must be supplied by the states. Other grants are given on a similar basis for the study of national defense, connected science projects, and research in atomic energy.

It appears that if our institutions of higher education are to continue to educate American youth in the manner to which we are now accustomed, much

more aid must come from some of the above sources. This future aid will have varying effects on Collegiate Architecture.

1. Industry and the Individual contributor-
The modern businessman has accepted modern architecture for its functional simplicity and because he has been under the illusion that it is cheaper than other forms of architecture. Until now economy in modern architecture has been possible but not frequent. If the increased interest in the richness of architecture continues with its attendant higher costs, the businessman-educator may seek a reversion to our present style of architecture for college campuses.

One problem with donations from industry is already troubling some schools. The industrialist will give money willingly for engineering and scientific buildings but is frequently reluctant to donate funds for dormitories, endowment, and even liberal arts classroom space. Many times buildings are donated without endowment for their maintenance. This adds to the university's physical plant but draws from its endowment.

The type of buildings considered in the design for this new Quadrangle at Cornell is not likely to draw one single donor but will have to rely on the philanthropic gifts from a number of sources.

The individual contributor may still offer an occasional reactionary attempt by contributing a personal monument in Gothic or Georgian even at the cost of \$37.³⁸ per square foot. It is more probable, however, that the enlightened patron of the arts will donate more contemporary or even pace setting buildings such as the Jewett Art Center at Wellesley.

2. Government Support - Much attention has been given recently by the federal and state governments to the problem of the crises in American education. There is a long standing ideological debate about government interference with education, controls, and other political problems. In the next few years the crisis will undoubtedly overcome the reservations, and the federal government will offer some support to higher learning.

Government understanding of contemporary architecture has increased greatly in the past few years especially as the result of the successful foreign building program of the State Department. It is

hoped that when federal aid to our institutions of higher learning is given that the enlightened view of the State Department is accepted as a guide for our federal policy.

One type of federal legislation which would aid the preparing of any plans for new construction would be loans or grants to be given to universities and colleges to prepare master plans of their institutions. This would be extremely valuable whether the construction following the master plan was government sponsored or privately financed.

There have been too many cases of the siting of buildings without adequate room for expansion and not in the proper location for the students they serve. The development of plans for expansion of a university require the same consideration as the plans for any other community.

THE PHILOSOPHY OF EDUCATION AT CORNELL

THE PHILOSOPHY OF EDUCATION AT CORNELL

Cornell's educational philosophy may best be summerized by the thoughts of two of her distinguished leaders. Ezra Cornell, founder of the University, said, "I would found an institution where any person can find instruction in any study".

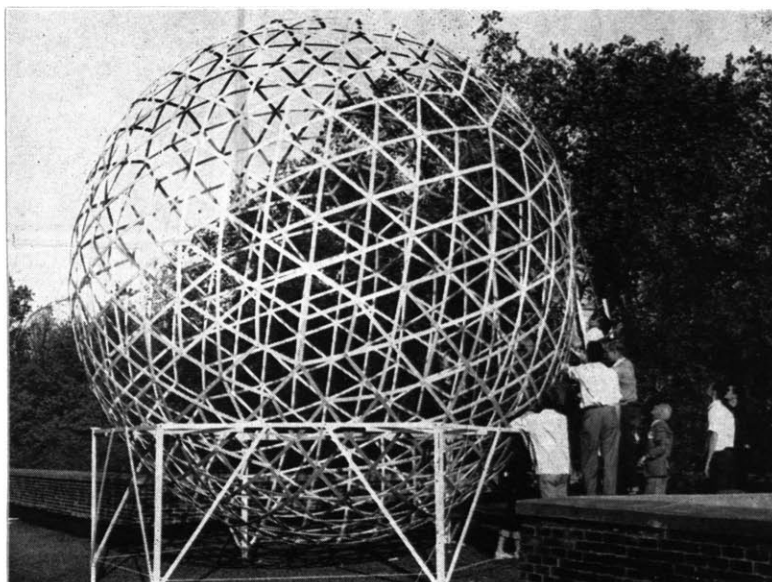
Cornell embodies this diversification in its curriculum today. There are fourteen distinct divisions of the University in Ithaca and one in New York City and one in Buffalo. These divisions deal with every phase of human existence from the minute world of micro-biology to the universe of astronomy. Education is open to both sexes, and students come from every country in the world.

With the diversity and freedom that Cornell offers there is also an obligation. Prof. Carl Becker, a distinguished historian on the faculty for many years, summerized this, "Cornell allows a maximum of freedom and relies confidently upon the sense of responsibility for making good use of it".³⁹

Freedom and responsibility describe the Cornell program. It is this reliance on the student rather

than on the restricted curriculum that has contributed to Cornell's growth as a great university.

THE COLLEGE OF ARCHITECTURE



THE COLLEGE OF ARCHITECTURE

The College of Architecture relies upon the same precepts of freedom which are the main spring of the University. There is no "style" or type of architectural training at Cornell but rather a broad general training which encourages the development of the individual student. The discipline is that of sound architecture rather than the discipline of a set style.

The College was established in 1871 largely through the efforts of Andrew Dickson White, the first president of the University. Many of his books still are part of the extensive library.

The College has four organized and three informal degree programs. A five year course for a professional Bachelor of Architecture degree, a four year course for a Bachelor of Fine Arts degree, a two year graduate program with a Master in City or Regional Planning degree, and a Masters of Landscape Architecture course. All these programs require certain subjects to be studied by the student. Degrees of Master of Fine Arts, Doctor of Philosophy

(In City or Regional Planning) and Master of Architecture have informal programs based primarily on the desires and previous training of students.

The College Administration

The administration of the College consists of the Dean, an Assistant Dean, an Administrative Aid, and several secretaries. The office of the Assistant Dean was created recently to ease some of the administrative responsibilities of the Dean.

In addition to guiding the course of the College, the present Dean and Assistant Dean both teach. The Dean leads seminars in City Planning, and the Assistant Dean teaches the entire History of Architecture.

The students and the administration of the College have always enjoyed a close relationship.

The Design Department

The Design Department is responsible for the Design sequence of courses taken by every architectural student.

Freshman Design involves simple form design

problems, followed by elementary architectural projects. The second and third year design classes study problems which are progressively more difficult.

The fourth year is instructed by visiting critics who are usually distinguished practicing architects. They are given complete freedom in their choice of problems for the students. Many students find this year of study the most rewarding due to the constant exposure to new ideas.

The fall term of the fifth year design course is divided into two options. The student may take either a series of small problems or he may elect to join the graduate class in City Planning for a term of City Planning Design.

The thesis for the Bachelor's degree occupies the spring term of the fifth year.

The Architectural History, Structures, Office Practice and Descriptive Geometry Departments.

These departments usually center around one or two men who teach all the courses concerning that subject.

The Architectural History sequence consists of

six terms of instruction covering the subject in great detail from pre-historic times to the present. A survey course is also offered for students outside the College.

These courses are given primarily through the aid of slides. The College has an extensive collection of both color and black and white slides in glass. Last year 10,000 colored slides were mounted.

The structures sequence is, with, with the exception of one course, all taught within the College. These courses are designed especially for architects.

Office Practice consists of one term of working drawings, one of specification writing, and one of general office practice.

Descriptive Geometry is given for two terms in the freshman year.

The City and Regional Planning Department

This is a graduate department within the College of Architecture. The graduate classes average about 20 to 30. This program brings together not only

Landscape Architects and Architects but also economists, civil engineers, sociologists, and many others. This diversified group within the College serves as a stimulus to the student body.

Most of the courses in this program are given in small seminars. In addition to classes given in the College these students also take subjects in the Business School and the School of Industrial and Labor Relations.

THE DEPARTMENT OF ART



THE DEPARTMENT OF ART

This department is a semi-autonomous branch of the College of Architecture. Although all architectural students take courses in this department, its largest space requirements are for students of art.

The program in art is developed jointly by the College of Architecture and the College of Arts and Sciences. No attempt is made to develop the commercial artist, but time is devoted to the mastery of life, form, mass, and color. This serves as an excellent foundation for later specialization.

The instructors in this program are all active artists.

THE DEPARTMENT OF FINE ARTS



THE DEPARTMENT OF FINE ARTS

The Fine Arts Department offers two types of courses: elective survey courses for the interested student majoring in another subject and organized programs for students majoring in Fine Arts. The student majoring in Fine Arts also takes courses in Music, Literature, and Visual Arts.

Instruction in the Department of Fine Arts is primarily devoted to the history of art. The practice of art is under the Department of Art in the College of Architecture.

Although courses covering all periods of art are available, particular attention is given to the post-impressionists.

Enrollment records show students from the Colleges of Arts and Sciences, Architecture, Engineering, and Home Economics take these courses most frequently.

THE DEPARTMENT OF MUSIC



THE DEPARTMENT OF MUSIC

The Music Department provides extensive courses in Music theory, Music history, and applied Music. Applied Music includes the individual study of instruments or voice under an instructor as well as such group work as choirs, bands, and orchestras. These courses are open to all students. Some require certain basic musical talents, but others do not.

In addition to offices, classrooms, and practice rooms, this department requires space for listening to recordings.

The Department of music draws the majority of its students from the Colleges of Arts and Sciences, Architecture, and Home Economics.

THE DEPARTMENT OF SPEECH AND DRAMA



THE DEPARTMENT OF SPEECH AND DRAMA

The Department of Speech and Drama is divided into three sections: public speaking, speech training, and phonetics and dramatic production.

The basic course in public speaking is popular with students in the Engineering College and in the unclassified division. Advanced courses in argument and public address are also offered.

Speech training is designed to correct defects resulting from both physical and emotional problems. A speech clinic is also operated by the department.

Dramatic production gives a series of courses in the production and writing of plays. Many of the students active in this field of speech and drama participate in the Dramatic Club and the student musical-drama organizations. These activities provide a laboratory for student practice. The center of this dramatic activity is Willard Straight Hall, the student union.

The enrollment in the basic courses in all these sections is large and diverse. According to enrollment records, students from every undergraduate college take public speaking 101. The more advanced

courses consist of smaller groups drawing students primarily from the College of Arts and Sciences.

In all the above departments the emphasis is on freedom and the diverse program. The value of this lack of complete specialization has been defended by many Cornellians, but the philosophy was well summerized by George Howe the late Dean of Yale's College of Fine Arts, "A specialized course of training may be compared to a tree. Specialized knowledge is the root and trunk which support the whole structure and draw nourishment from the earth. Related knowledge in many fields is the system of branches which extends its leaves to receive the light, the air, the rain, from the surrounding atmosphere. So, even if time were no object, a hundred specialized courses might lead in the end to produce only a forest of dry poles".

A NEW QUADRANGLE FOR CORNELL UNIVERSITY

A NEW QUADRANGLE FOR CORNELL UNIVERSITY

1. The University Location

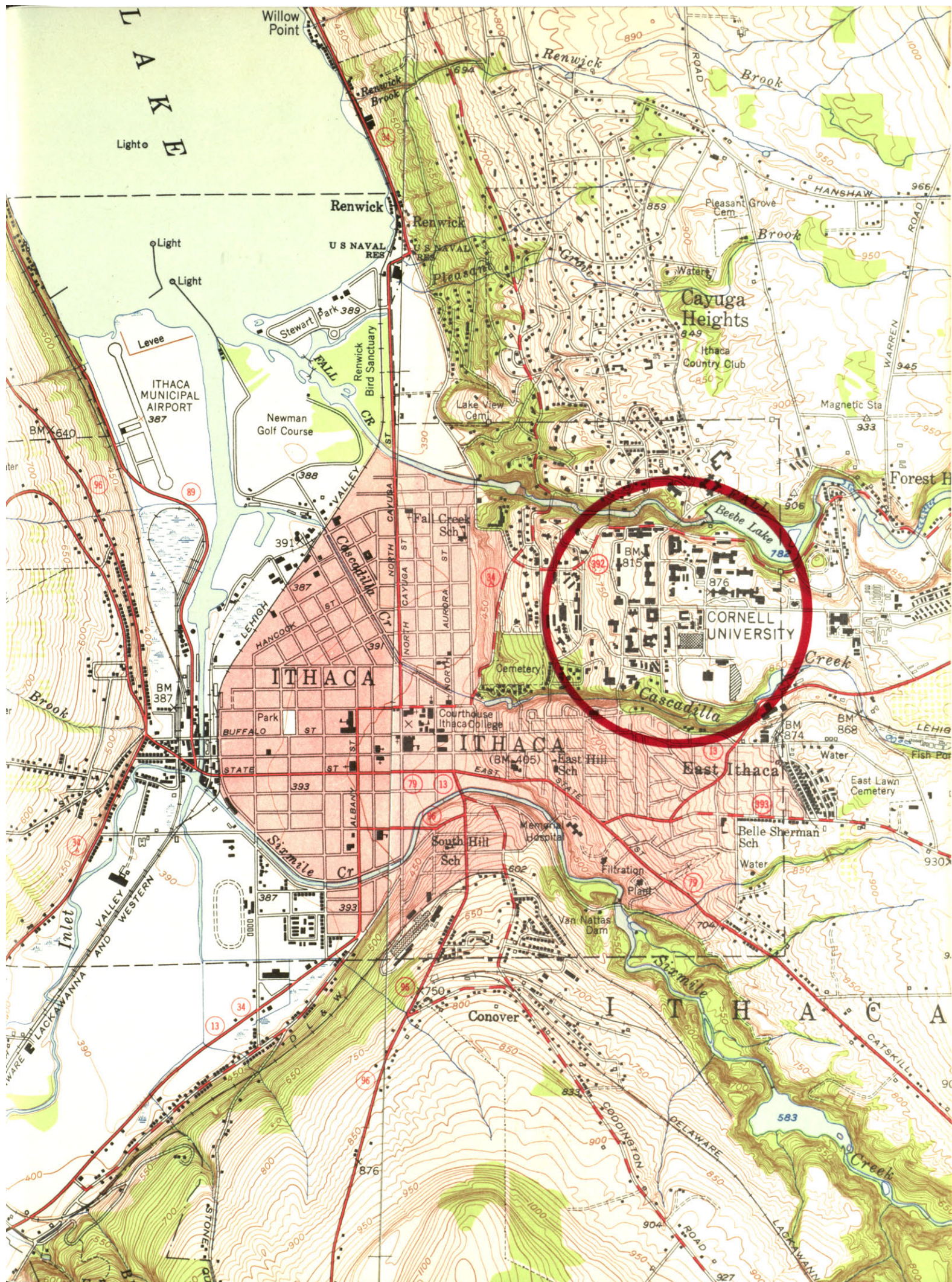
The University occupies over 800 acres of land northeast of Ithaca, New York (See page 65). The student population is 10,106 (1956) and the faculty number 1,698 (1956). Ithaca has a population of only 29,000.

The campus is located on a hill over-looking the city and Cayuga Lake. As Kenneth Roberts wrote, the students, "look perpetually down in their comings and goings, on a deep valley and a narrow blue Lake that stretches off into infinity, and a distant wall of farm-checkerboarded hill slopes, across which move baby cloud shadows, toy thundershowers, and diminutive snow squalls in their respective seasons."³⁹

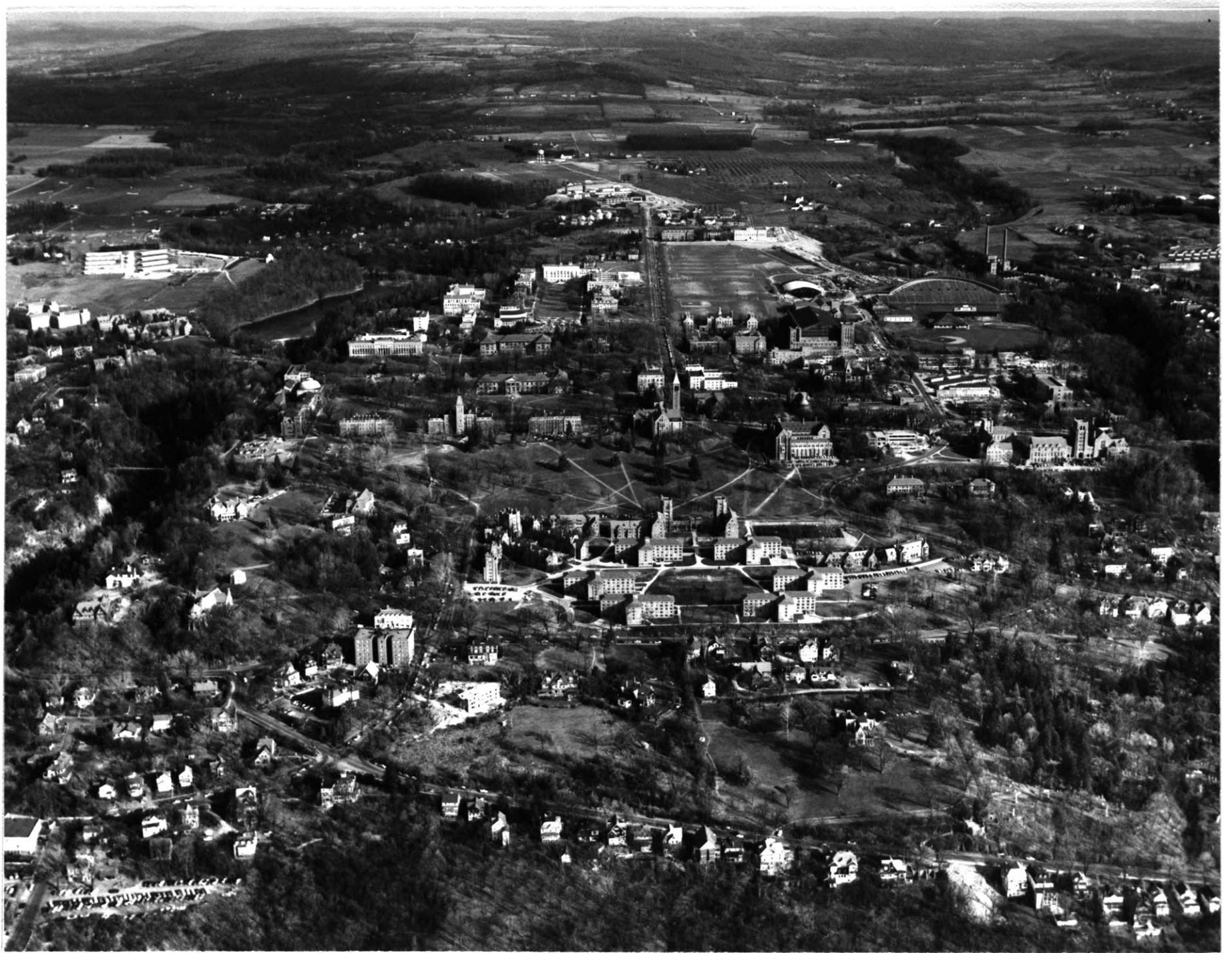
The campus is bounded on the south by Cascadilla Gorge and divided from the women's dormitories on the north by Fall Creek Gorge. These dramatic streams with their numerous waterfalls, spectacular cliffs, and quiet pools, provide beautiful boundries.

A profusion of trees border the paths and line the gorges. (See page 66) The University is dominated by the 173 foot tower on the library. Down

The University Location

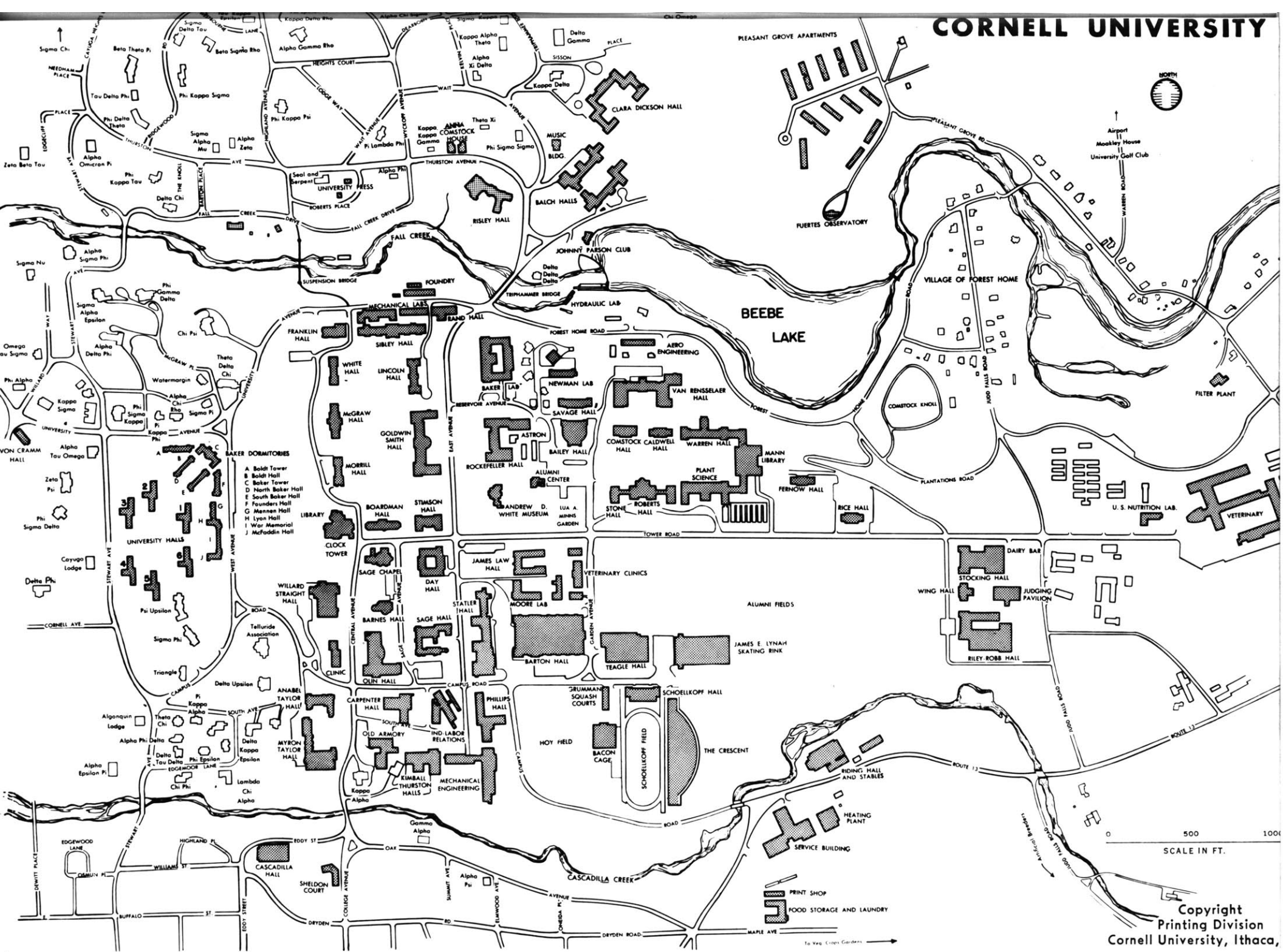


An Aerial Photograph of the Entire University



Map of the Entire University

CORNELL UNIVERSITY



long avenues of trees or up the library slope this tower is a landmark and center of the campus.

2. The Heart of the University

The heart of the campus is the College of Arts and Sciences Quadrangle, referred to as the "Main Quad" in the jargon of the students. This Quadrangle is surrounded by the oldest buildings on the campus. The western three were built in 1868, Morrill, McGraw, and White and were used by the first students at the University. (See page 69)

The Main Quadrangle is approximately 1000 feet long and 350 feet wide. It is criss-crossed by numerous paths which are the unordered results of the traffic of generations of students.

In addition to the original three buildings, the Main Quadrangle is surrounded by the Library, Boardman Hall (soon to be replaced by an addition to the Library), Stimson Hall, Goldwin Smith, Lincoln Hall, Rand Hall, the Sibley Halls, and Franklin Hall. The first four are used by the College of Arts and Sciences in addition to parts of McGraw and White and all of Morrill. Lincoln, Rand, and Sibley Halls

The Arts and Sciences College Quadrangle (The
Main Quadrangle) and the Library Slope



were used formerly by the College of Engineering before it was moved to a new quadrangle in 1956. Franklin Hall is being used on a temporary basis by the College of Architecture.

3. The Problem

The College of Architecture was established at Cornell within three years of the opening of the University in 1868. This College was the personal project of the first president of the University, Andrew Dickson White. He contributed generously to its library and endowed one of its professorships.

Today this College, one of the finest in the country, occupies the two top floors of one of the original university dormitories, White Hall. It also uses the second hand facilities of a 19th Century Electrical Engineering building, Franklin Hall. Neither building was intended for this present use, and the space provided is inadequate. Faculty office space is at a premium, and professors frequently have offices of less than 80 square feet. The facilities are almost equally divided between the two buildings making the work of the

staff especially difficult.

The Department of Art was housed for forty years in the first two floors of Morse Hall (raised in 1955) the former Chemical Engineering building which burned in 1915 from a height of four floors to two. In 1955 this department moved to Franklin Hall. Its new quarters are virtually the same as those in Morse Hall although they are even older. In neither case could the facilities be called adequate.

Both the Departments of Music and Speech and Drama are scattered in several parts of the campus. They also lack faculty, library, and practice facilities. There are no adequate classrooms designed for listening to music in the Department of Music. Many of the offices of the Speech and Drama instructors are a ten minute walk from their professors and classes.

The Department of Fine Arts has an extensive collection of prints and casts which it cannot properly display because of the lack of space. One of the Fine Arts classrooms, "temporary" for many years, is at the end of the museum of casts with particularly poor acoustics. The College of Architecture

and the Department of Fine Arts teach courses covering the history of art and architecture, yet there is little coordination of program and contact between students due to the wide separation of these departments.

All the facilities in each of these departments are strained to the maximum. No space is available for future expansion which will be necessary as the student body grows. The present student enrollment in Architecture is 250, the anticipated enrollment by 1965 is 350. Arts and Sciences will expand from 2700 to 3000.⁴⁰ There is no place to put these students in the present buildings.

This problem becomes more complex when examined from the perspective of the University as a whole. The increased emphasis on engineering and science has necessitated more and more space for the teaching of mathematics. The College of Arts and Sciences could use all of White Hall for this purpose. The mathematics department now occupies the bottom two floors of White Hall. The increasing pressure for general classroom space in the College of Arts and Sciences will force the Graduate School of Public and Business

Administration to move out of McGraw Hall. The current proposal is that this College move into Franklin Hall. (This is discussed in greater detail below).

In this game of musical chairs the College of Architecture which only two years ago moved some of its facilities to Franklin Hall from White Hall will now move all its facilities to Sibley (See map page 66)

The Sibley Buildings were originally constructed in several stages for the College of Engineering. Although on paper there is ample square footage for all the architectural facilities, in actuality much of that is not usable. The condition of the buildings is not good. The cost of the original buildings, less than \$3.00 a square foot, in 1871 to 1902, is an indication of the quality of construction. In contrast to a well built building of the same era, Goldwin Smith Hall built with a much simpler plan cost \$4.50 per square foot.

To summarize the problem: new facilities are needed for the College of Architecture and the De-

partments of Fine Arts, Music, and Speech and Drama to meet their present requirements. The present facilities will become inadequate as the student enrollment increases.

The more liberal program being taken by the engineering students will increase the percentage of students taking electives in Art, Fine Arts, Music, and Speech and Drama. Elective courses are now contemplated for Architecture also. The increase in enrollment will include a greater number of women. The College of Arts and Sciences has been forced in recent years to turn away many qualified women applicants because of a shortage of dormitory space. New dormitories will accompany the planned university expansion. Any increase in the percentage of women in the student population will increase the number of students majoring in Art as the majority of Art majors are women.

All these facts combine to make new facilities for these branches of the University mandatory.

There is also a great need for a student museum to supplement the White Art Museum which has only a moderate amount of space available. The

White Museum would be used for the permanent University collections and the student museum for traveling exhibits.

The faculty of Fine Arts could administer this museum as they do the present White Museum.

This student museum should be easily accessible to the majority of students to be enjoyed during breaks between classes.

4. The Selection of a Site

The logical location for any new construction involving Departments in the College of Arts and Sciences is on or near the Main Quadrangle, the center of this college.

The College of Architecture, an autonomous college as far as its program is concerned, it encourages students to take electives in the College of Arts and Sciences, however. The Department of Art in the College of Architecture requires its students to take 54 units of electives, 18 of which must be taken in the College of Arts and Sciences.⁴⁰

With such close ties to the College of Arts

and Sciences any development involving the College of Architecture must be located on or near the Main Quadrangle.

5. The Site

In conformance with these requirements the site selected for this thesis is the north end of the Main Quadrangle, the area now occupied by the Sibley Halls, Rand Hall, Lincoln Hall, the Mechanical Laboratories, and Franklin Hall. (See page 77)

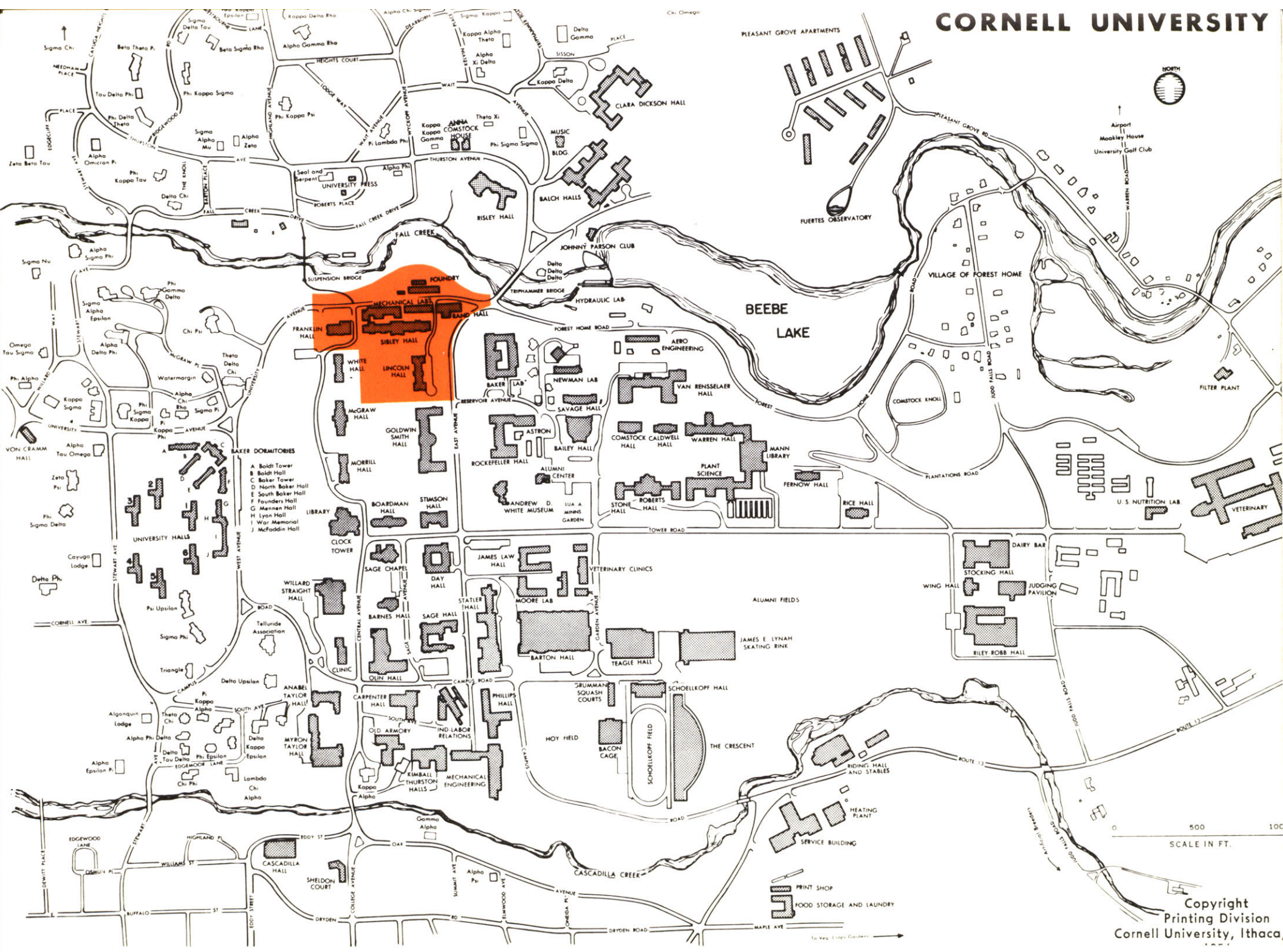
Morrill, McGraw, and White were the original buildings. White Hall severely limits the site for the proposed buildings. Although these three buildings could well be removed and replaced with more useful classroom space, their deep roots in Cornell history prevent this consideration.

6. Present Land Use

The present land use at Cornell, especially that of the Graduate School of Business and Public Administration has a direct bearing on the development of this site. The present plans call for

The Site for A New Quadrangle for Cornell University

CORNELL UNIVERSITY



the moving of this school from McGraw Hall to Franklin Hall. A new addition is planned for Franklin to accommodate the Business Library (See page 79)







This location is not suitable for the students who use the school. In addition to the graduate students in this school there are also many undergraduates who "double Register" in their undergraduate program and take this course. The majority of students who "double register" are in the Colleges of Agriculture, Arts and Sciences, Engineering, Industrial and Labor Relations, and Law.

The location in Franklin Hall would place this school in close proximity only to students in the College of Arts and Sciences. It is as far as possible from the students in Agriculture, Hotel Administration, Engineering, Industrial and Labor Relations, and Law.

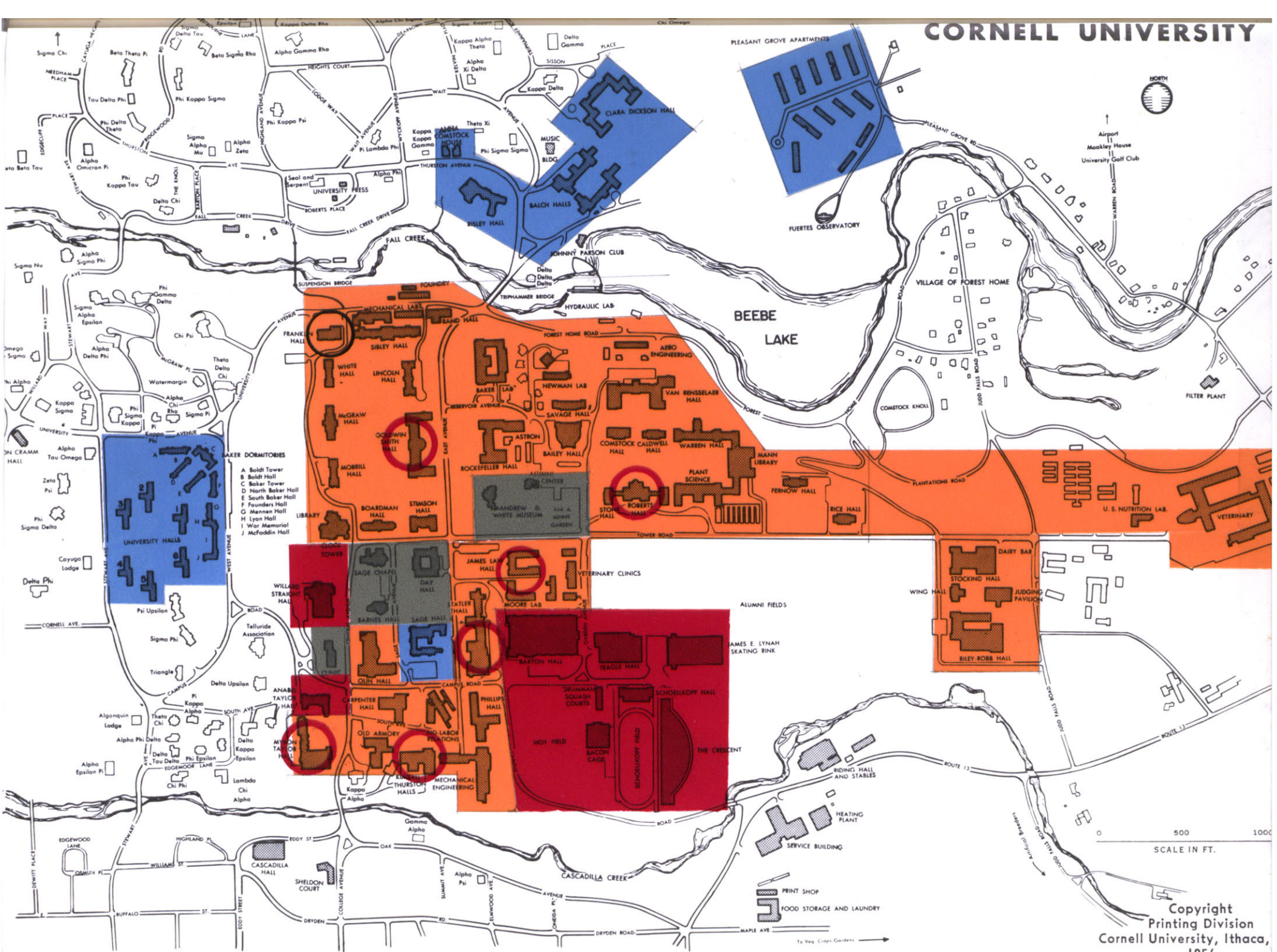
7. Proposed Land Use

To improve the circulation to the School of Business and Public Administration it should be

Existing Land Use:

-  Classrooms, Libraries and Laboratories
-  Dormitories
-  Administration
-  Student Activities and Athletics
-  Present Proposal for Business School Location
-  Colleges having students "Double Registered"
In the Business School

CORNELL UNIVERSITY



Proposed Land Use:



New Classroom, Library and Laboratory Use



New Dormitory Use

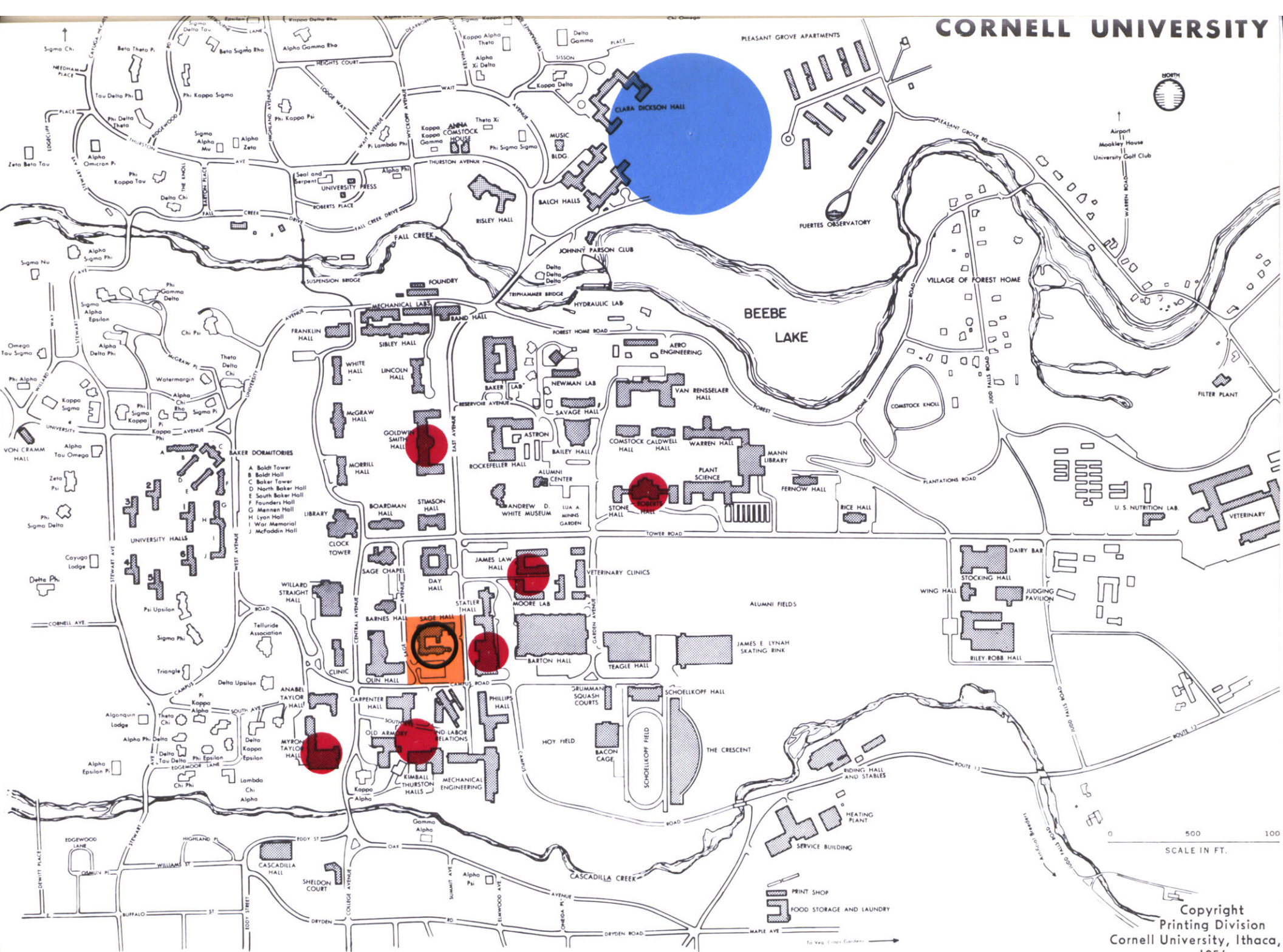


New Business School Location

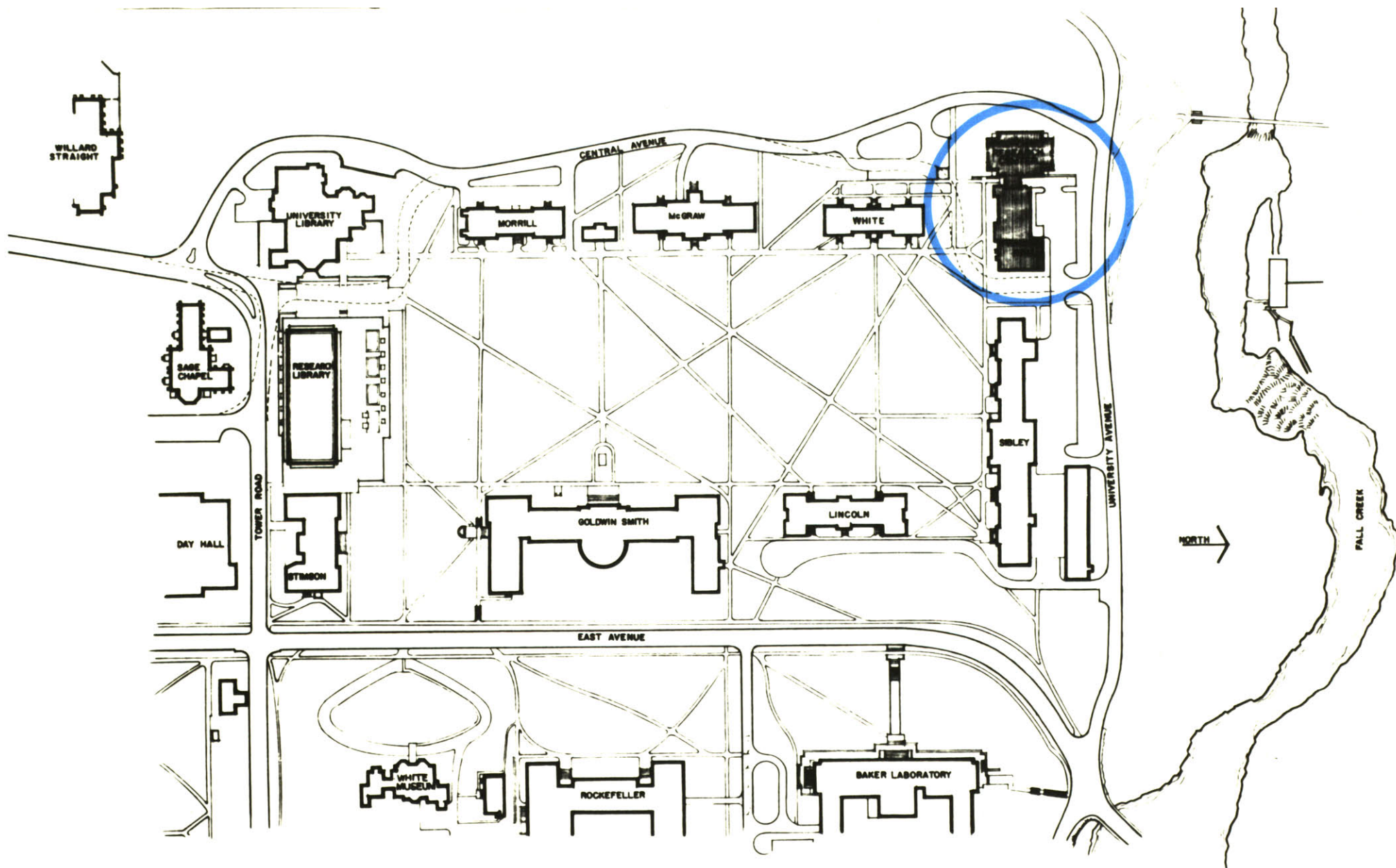


Colleges having students "Double Registered"
in the Business School

CORNELL UNIVERSITY



Proposed Site for the School of Business and Public
Administration



QUADRANGLE PLAN

100 0 100 200
SCALE IN FEET

PROPOSED RESEARCH CENTER
OF THE
GRADUATE SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION
CORNELL UNIVERSITY
ITHACA, NEW YORK

located in a more central spot on the campus. The ideal location is a site now occupied by Sage Hall. (See map plans of existing land use and proposed land use) Sage Hall, a womens' dormitory, does not conform to the rest of the womens' dormitories at Cornell. It could easily be replaced by a new dormitory opposite Clara Dickson Hall in the womens' dormitory area. Sage Hall was built in 1872 and is an expensive building to heat and maintain. It is a twenty minute walk from Sage to the womens' athletic fields and the proposed womens' sports building.

The removal of Franklin Hall would also make possible fuller use of the proposed site for the new buildings mentioned above.

8. Natural Features of the Site

The proposed site for these new buildings would have a variety of man-made and natural views. The Main Library and several buildings of the Quadrangle viewed through the stately elms can be seen from this site. (See colored photographs in presentation) To the west of the site is the best

campus view of Cayuga Lake. To the north is the Fall Creek Gorge and the suspension foot bridge high above the rushing waters.

The site slopes gently from east to west except for a sharp rise behind the present location of Lincoln Hall and along East Avenue. The proposed development is limited on the east by East Avenue, on the south by a large grove of elm trees, on the west by the new location of Central Avenue, and on the north by the Fall Creek Gorge.

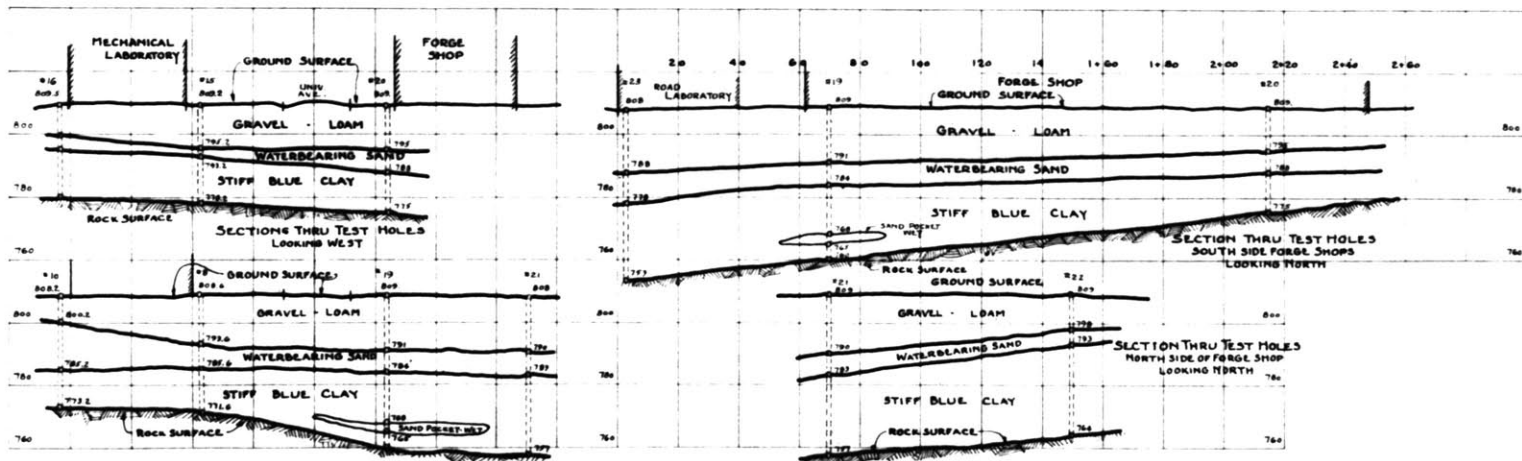
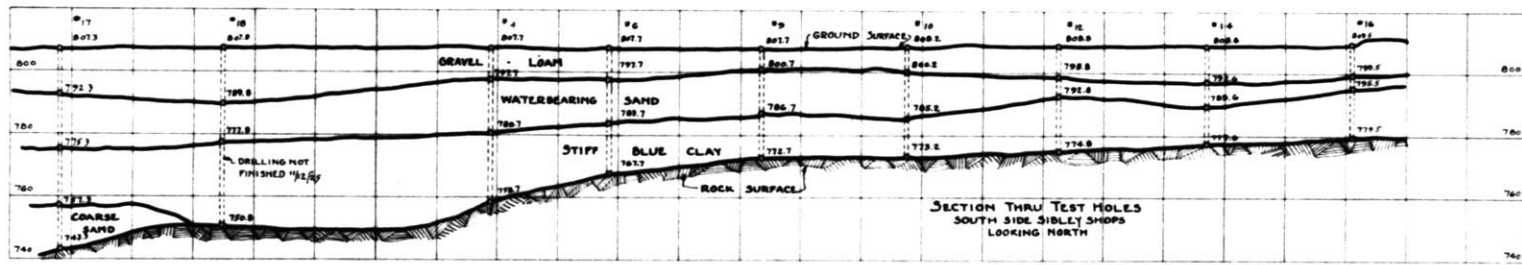
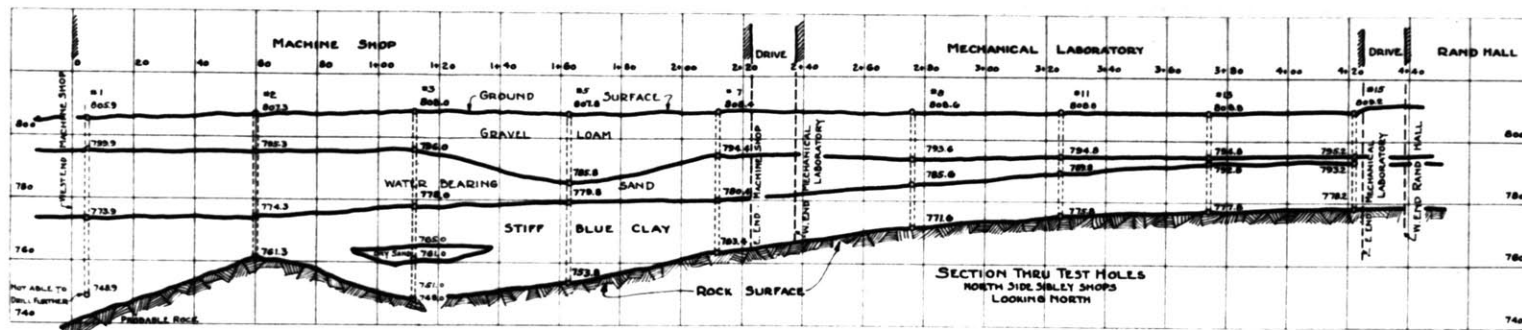
Respect for the natural beauty and the variety of views from the site will greatly influence any design.

9. Structural Features of the Site

A record of borings taken on the site of the Sibley Halls show the location of sub-surface rock approximately forty feet below the ground surface. (See page 82) The general soil condition is good for foundations and, as seen above, bed rock is available if necessary.

10. Landscaping Restrictions

Test Borings on the Site of A New Quadrangle for
Cornell University



Any tree or shrub which will grow in the northern part of the United States may be used for landscaping on this site with one exception. The American Elm, now prevalent on the campus, has been suffering from Dutch Elm disease. It is recommended that this tree be eliminated from any landscape plan.

11. The Climate

Ithaca has pleasant summers and relatively mild winters. The climate is such that many classes are held outside during the last two months of the Spring Term. (See page 84)

The temperature extremes are:

January + 25° Low average

July + 72° High average

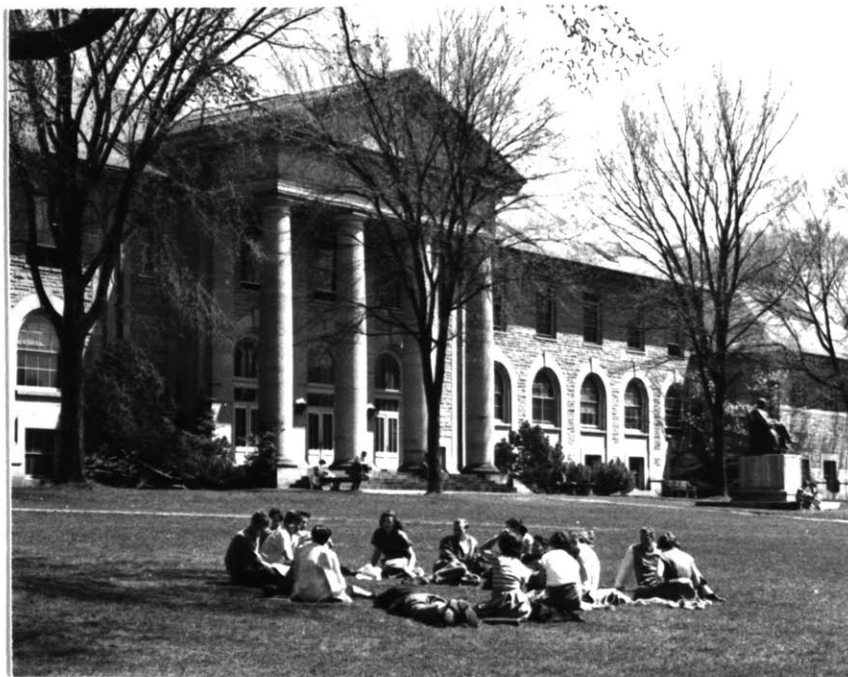
The average precipitation is 3.06 inches per month.

Because of the pleasant weather, outside working spaces should be provided where possible.

12. Student Traffic Flow

The student traffic flows in several directions across the Main Quadrangle as is shown by the time

Open Air Classes in the Spring



worn paths. There are certain large group movements through this space. The major traffic paths are:

a. From Goldwin Smith through the Morrill, McGraw and White area to the mens' dormitories and the fraternity houses.

b. Diagonally across the quadrangle from the Library to the space between Lincoln and Sibley. This has been created by the girls going to and from their dormitories.

c. From the library to Goldwin Smith Hall. This is the result of students in the College of Arts and Sciences circulating from the library to their main classroom building.

Minor traffic routes:

a. From the Physics and Chemistry building East and West across the Quadrangle.

b. Students from the Quadrangle walking across the suspension bridge.

c. Minor direct traffic between the Arts College buildings.

13. The Program Requirements

Listed below are the required areas for the College of Architecture with its Department of Art and the Departments of Fine Arts, Music, and Speech and Drama in the College of Arts and Sciences. These requirements have been developed with the help and cooperation of Dean Thomas W. Mackesey of the College of Architecture, Dean Francis E. Mineka of the College of Arts and Sciences and Professors F. O. Waage of the Department of Fine Arts, William W. Austin of the Department of Music, and H. D. Albright of the Department of Speech and Drama.

THE COLLEGE OF ARCHITECTURE

Required Space for Architecture and Planning

<u>Administration</u>	<u>sq. ft. net</u>
Dean's Office	400
Conferenc Room	600
Assistant Dean	200
Administrative Aid	100
General Office	500
Work Room	200
Waiting Area	150
	<u>2150</u>
<u>Drafting Rooms</u>	
Freshmen (100 students)	5000

Drafting Rooms (Continued)

General (300 students)	15000
Graduate (30 students)	1600
*Auxiliary (30 students)	1600
	<u>23,200</u>

*Auxiliary drafting space is for students
outside the College of Architecture

Library

Reading Room and Stack Space	4000
Librarian - work	200
Map Files	400
Rare Book Room	200
	<u>4800</u>

Classrooms

Lecture Room (300 seats)	3000
4 Lecture Rooms (75 seats)	4800
4 Seminar Rooms @ 400 sq. ft.	1600
	<u>9400</u>

Offices

Design Office	300
Structural Office	200
History Office	200
200 Offices @ 150 sq. ft.	3000
	<u>3700</u>

Planning Department

General Office	300
4 Offices @ 150 sq. ft.	600
2 Drafting Rooms @ 1600 sq. ft.	3200
15 Graduate Studios @ 100 sq. ft.	1500
	<u>5600</u>

General

Slide Room	800
Model Shop	500

General (Continued)

Photo Shop and Dark Room	200
Materials Display (Clean)	1500
Materials Laboratory (Dirty)	1000
Exhibition Space	1800
3 Jury Rooms @ 400 sq. ft.	1200
Current Drawing Storage	900
Archives Storage	800
General Storage	700
Receiving and Shipping	300
Handyman	100
	<u>9800</u>

Net Total - 58,650 sq. ft.
11,730 - 20% allowance for corridors,
stairs, toilets, etc.
70,380

Required Space for the Department of Art

Administration

Department Office	300
10 Studio Offices @ 400 sq. ft.	4000
Reception and General Offices	300
	<u>4600</u>

Studios

4 Painting Studios (40 students per class) @ 2000 sq. ft.	8000
*Auxiliary Painting Studio (30 students)	1500
2 Painting Studios for Architectural Students @ 3000 sq. ft.	6000
Graduate Studio (30 students)	1500
Sculpture Studio - divided into three parts: General Life Ceramic	2000
	<u>19,500</u>

*Auxiliary Painting Studio is for
students outside the College

Required Space for the Department of Art (Continued)

Net Total - 27,000 sq. ft.
5,400 - 20% allowance for corridors,
stairs, etc.
32,400

THE COLLEGE OF ARTS AND SCIENCES

Required Space for the Department of Fine Arts

Administration

Department Office	300
5 Offices @ 200 sq. ft.	<u>1000</u>
	1300

Classrooms

Lecture Room (250 seats)	2900
Lecture Room (75 seats)	1200
2 Classrooms (30 seats each)	<u>600</u>
	4700

General

Exhibition Space	1000
Print Storage	800
Museum of Casts	2000
Slide Storage	<u>800</u>
	4600

Net Total - 10,600 sq. ft.
2,120 - 20% allowance for corridors,
stairs, etc.
12,720

Required Space for the Department of Music

Administration

Department Office	300
12 Offices @ 400 sq. ft.	2400
General Office	<u>400</u>

Administration (Continued)

Music Committee	400
	<u>3500</u>

Classrooms

Lecture Room (200 seats)	2000
3 Classrooms (30 students each)	900
6 Music Listening Rooms (15 students)	<u>1350</u>
	4250

Practice Rooms

20-25 Piano Rooms @ 125 sq. ft.	2500
15 Individual Practice Rooms	1500
Choir Practice (125 students)	<u>1250</u>
	5250

General

Record Room	2000
Sheet Music Storage	1000
Library Reading Room and Stack space	<u>3000</u>
Librarians Office	300
Instrument Storage	500
Lounge	<u>500</u>
	7300

Net Total - 20,300 sq. ft.
4,060 - 20% allowance for corridors,
stairs, etc.
24,360

Required Space for the Department of Speech and Drama

Administration

Department Office	300
Director of Theater Office	300
Director of Clinic Office	300
General Office	200
15 Offices for Faculty @ 200 sq. ft.	<u>3000</u>
	4100

Required Space for the Department of Speech and Drama
(Continued)

Classrooms

4 Speech Classrooms (30 students each)	2400
Speech Classroom (50 students)	1000
3 Seminar Rooms (20 students each)	1600
	<u>5000</u>

Library

Reading Room and Stack Space	1000
Film Library	400
Office of Director of Film Program	200
Librarian	200
	<u>1800</u>

Practice Rooms

5 Individual Practice Rooms @ 100 sq. ft.	500
4 "Playback" Rooms @ 100	400
Laboratory Theater	2500
	<u>3400</u>

General

For Laboratory Theater:	
Lighting Storage	500
Costume Storage	1000
Costume Workroom	500
Scenery Storage	1000
Scenery Shop	1000
Make-up Classroom	500
Make-up Dressing Room	500
Dressing Rooms 2 @ 500 sq. ft.	1000
Projection Booth	100
	<u>6100</u>

Net Total - 20,400 sq. ft.
4,080 - 20% allowance for corridors,
stairs, etc.
24,480

Require Space for The Student Museum

Gallery

General Exhibition	10,000
Special Exhibits	<u>1,000</u>
	11,000

Administration

Museum Office	400
Framing and Repairing	1000
General Storage	1000
Receiving and Shipping	<u>600</u>
	3000

Net Total - 14,000

1,000 - allowance for stairs and toilets

14. THE DESIGN AIM

- To create a series of buildings surrounding a space
- To endow this space with restrained drama and richness which will not over-power the beauties of nature
- In creating this space to recognize the power and majesty of the existing quadrangle
- To surround this space with architecture of a simple well ordered character with a subtle variety of interior spaces
- To form a composition which will have unity within itself and relate to the campus as a whole

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